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Fig.1

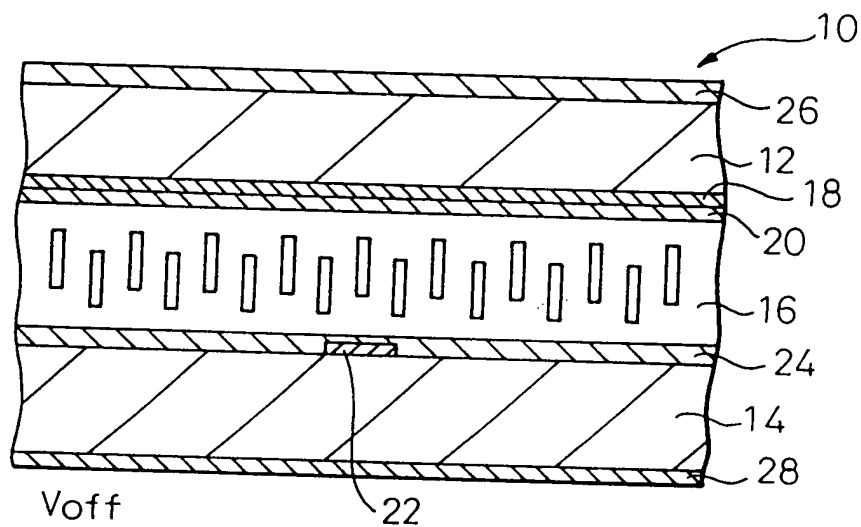
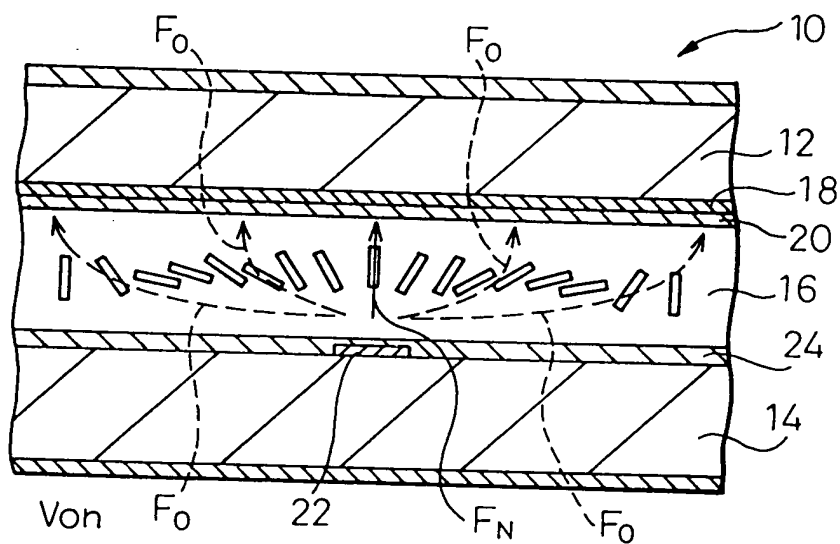


Fig.2



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Fig.3

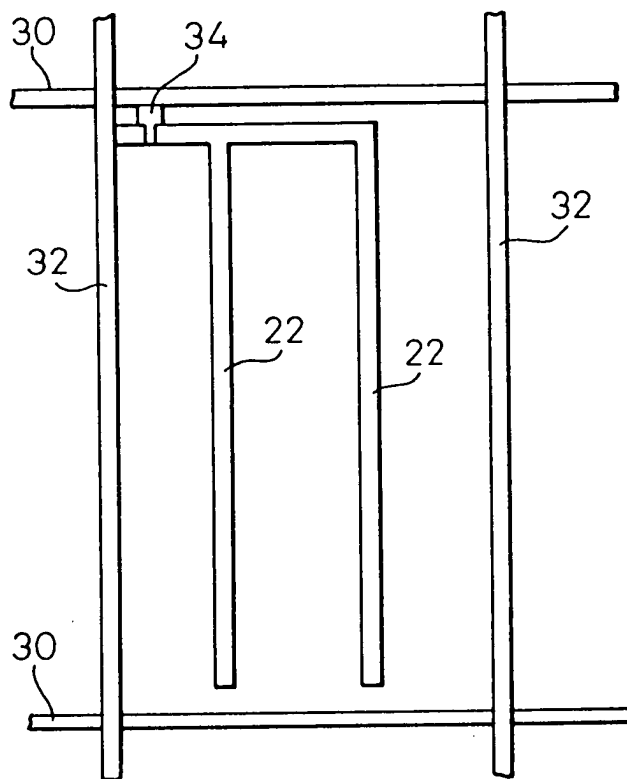
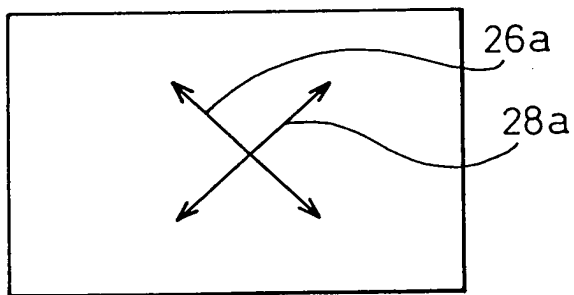


Fig.4



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Fig.5A

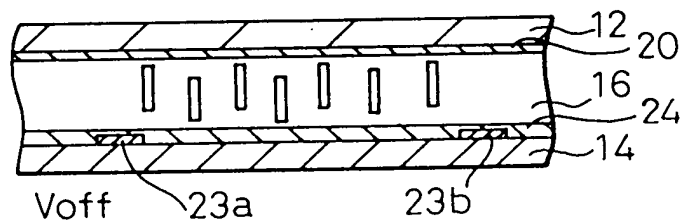


Fig.5B

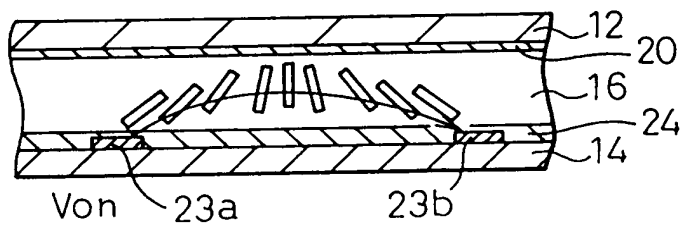
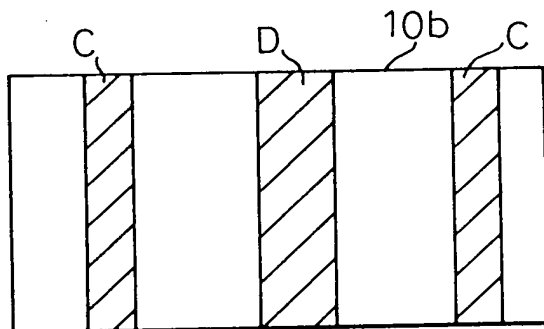


Fig.5C



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Fig.8

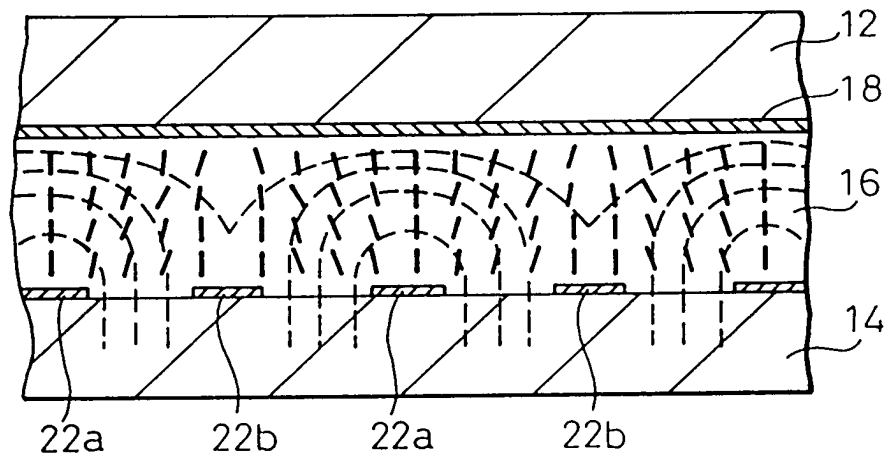
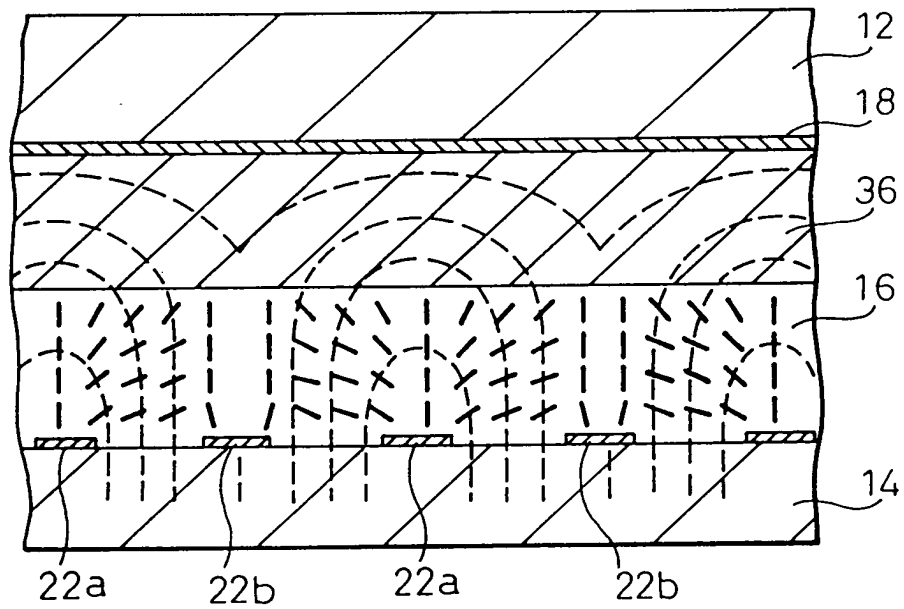


Fig.9



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Fig.10A

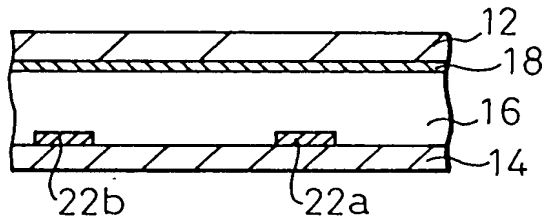


Fig.10B

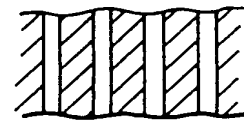


Fig.11A

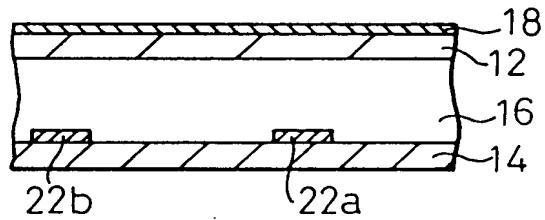


Fig.11B

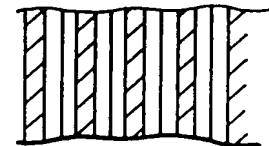


Fig.12A

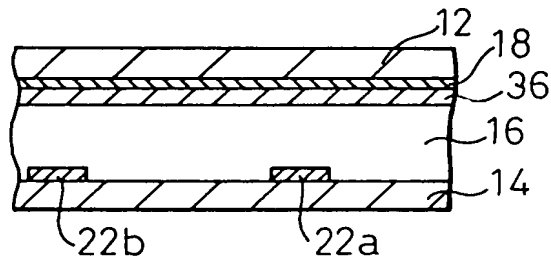
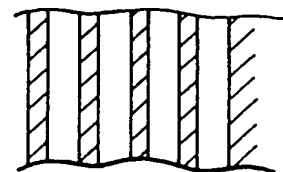


Fig.12B



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Fig.13

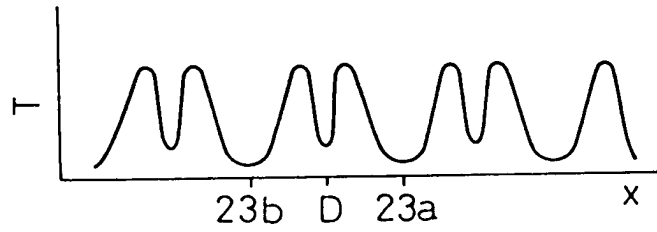


Fig.14

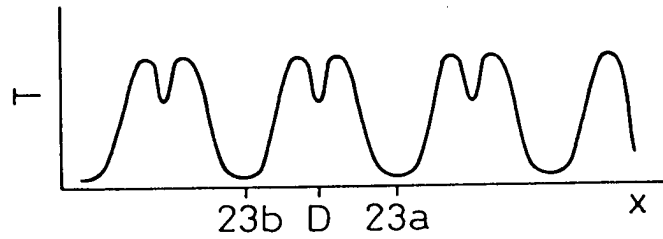


Fig.15

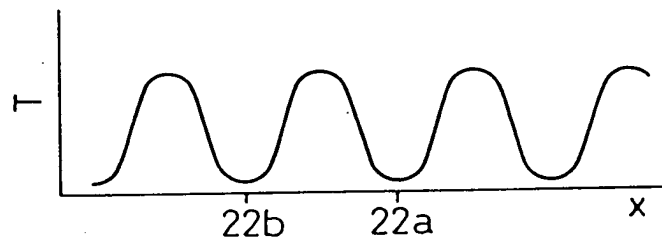
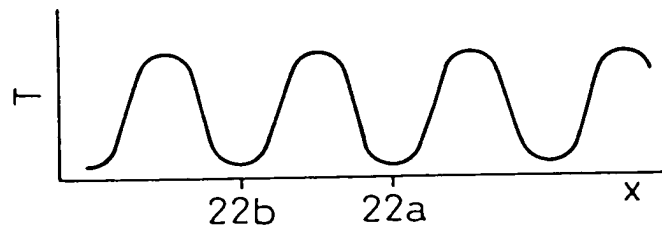
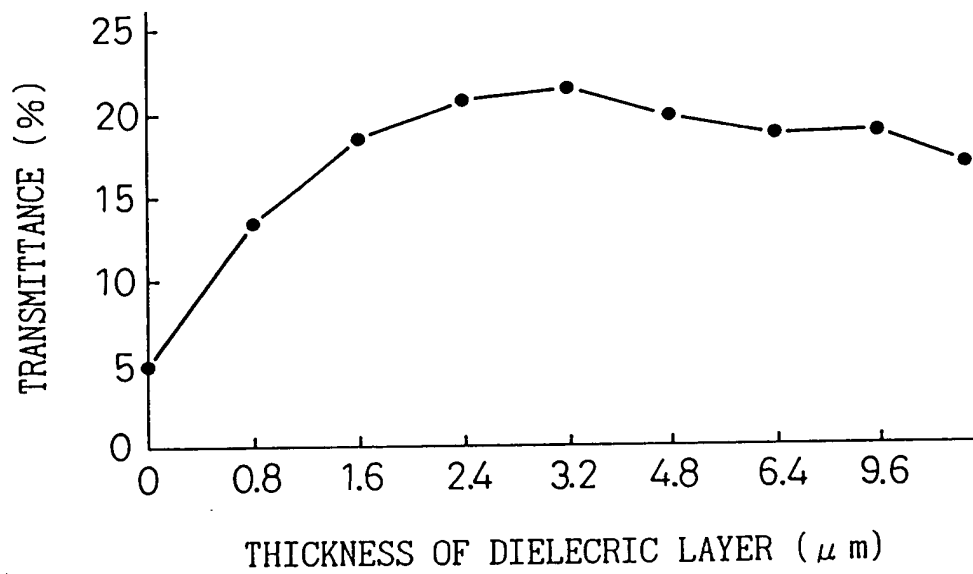


Fig.16



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Fig.17



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Fig.18

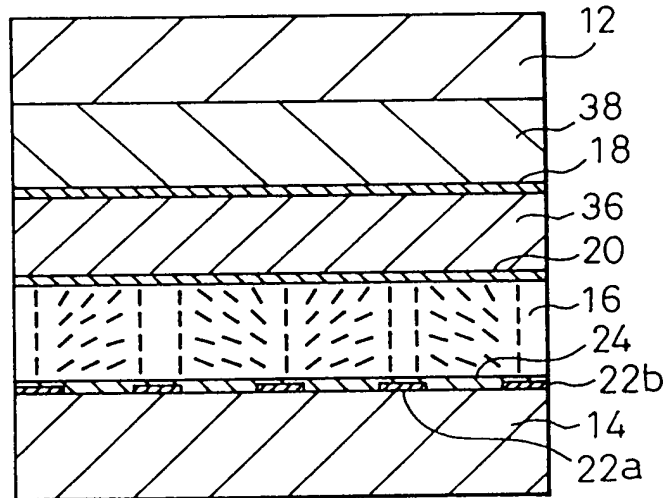
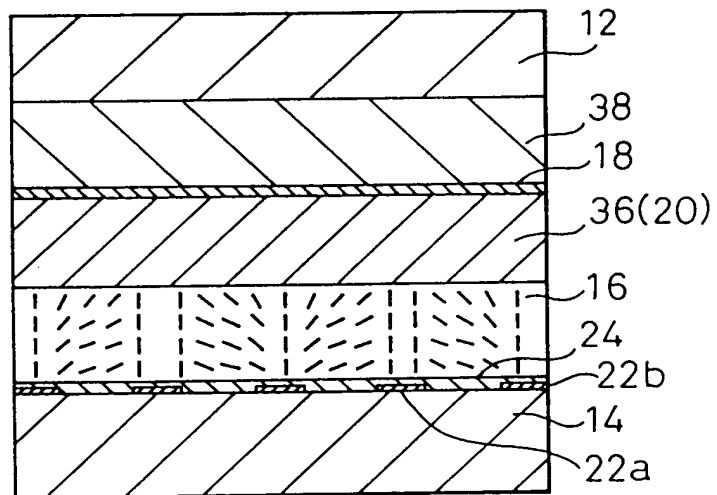


Fig.19



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Fig.20

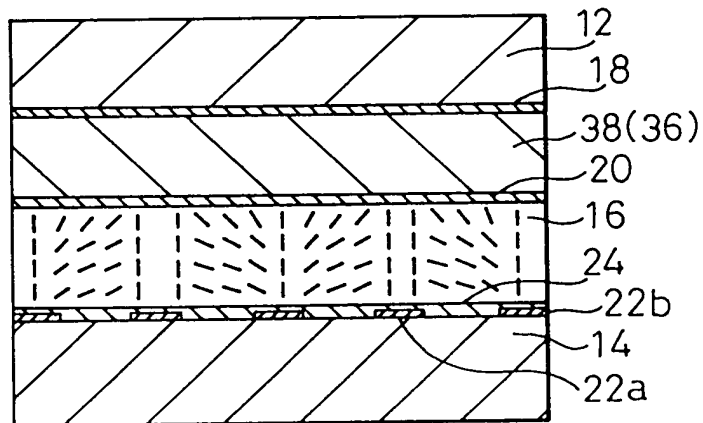
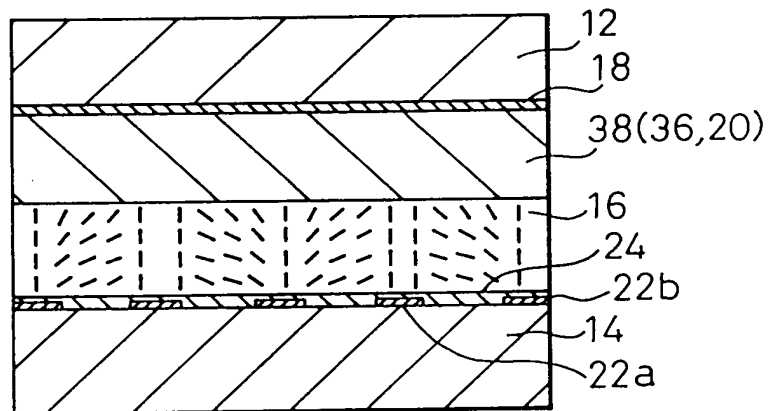
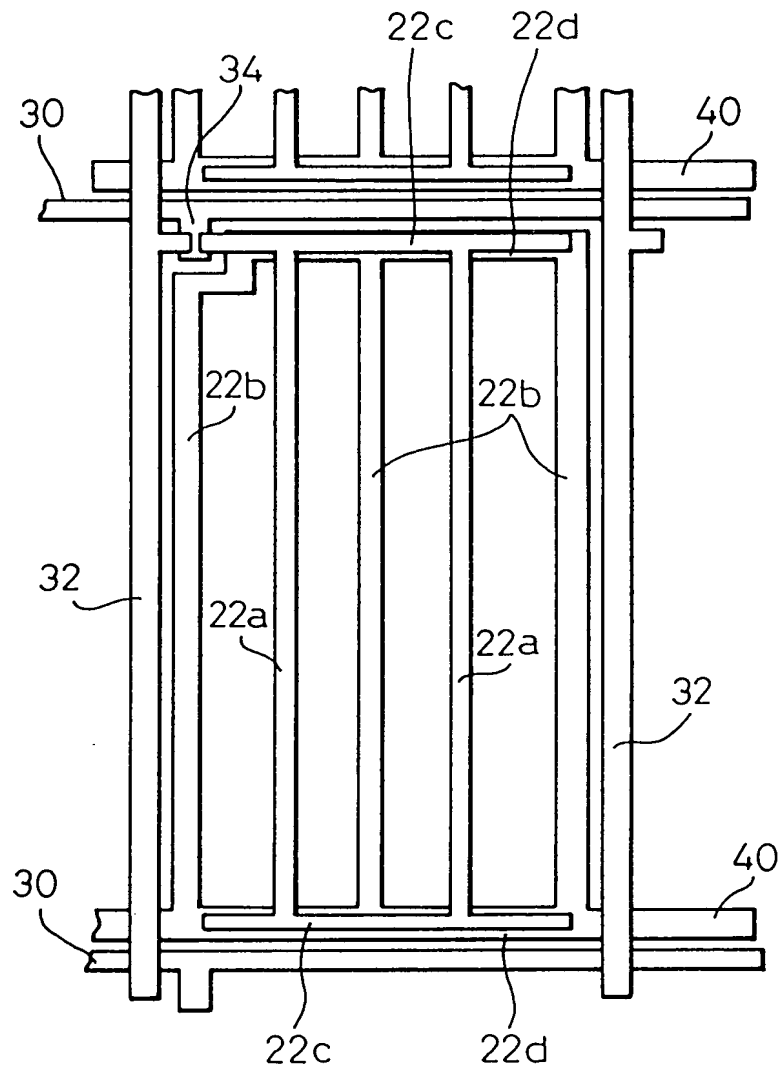


Fig.21



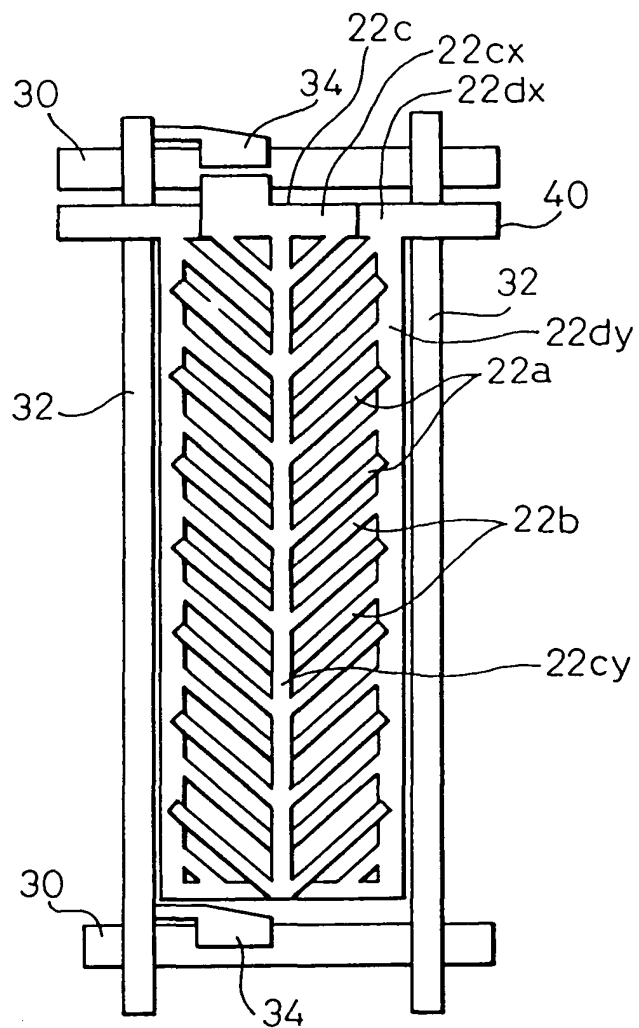
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Fig.22



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Fig.23



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Fig. 24

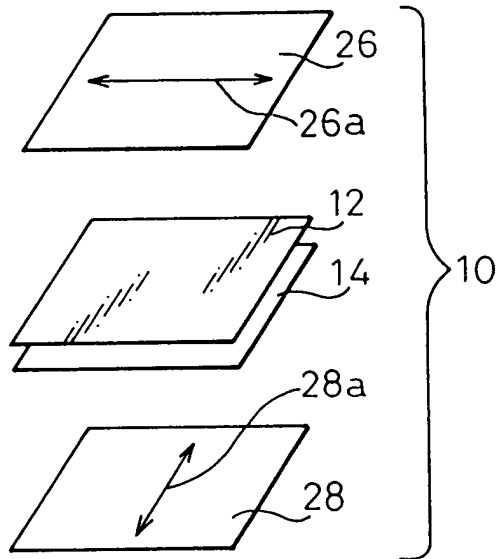
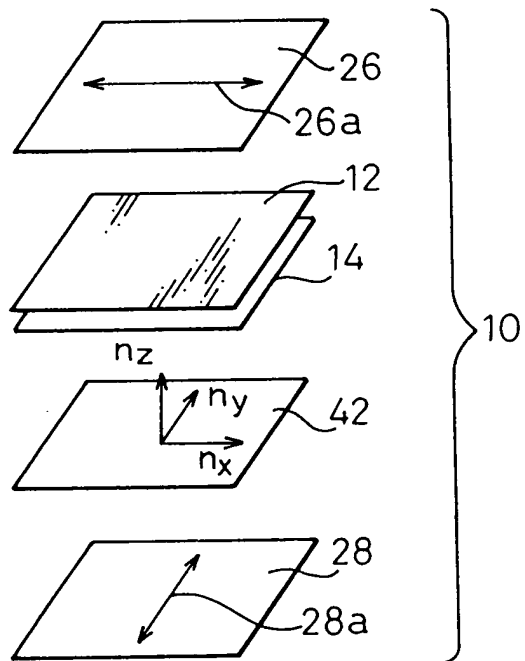


Fig. 25



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Fig.26

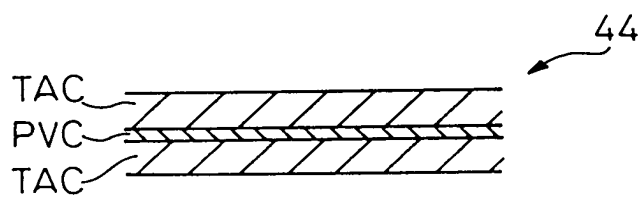
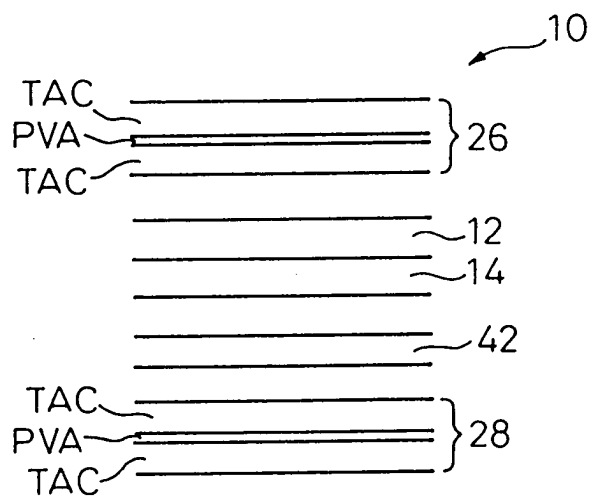


Fig.27



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Fig.28

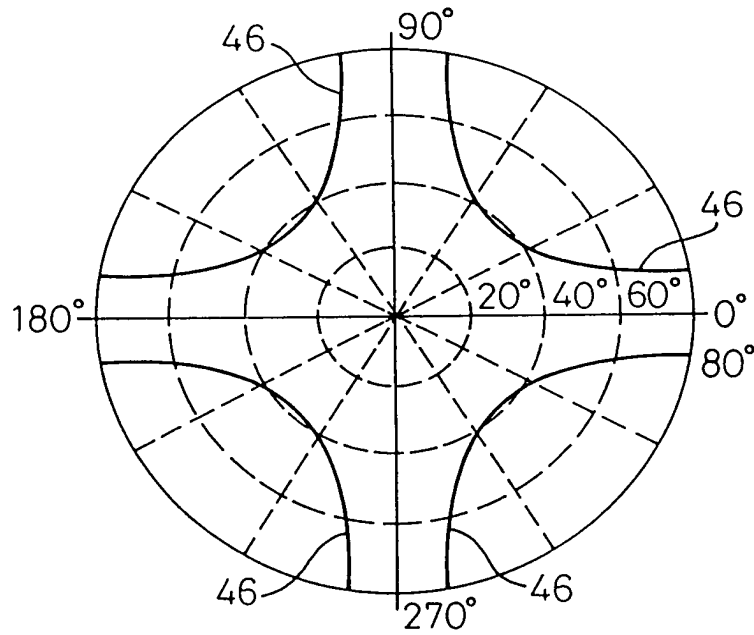
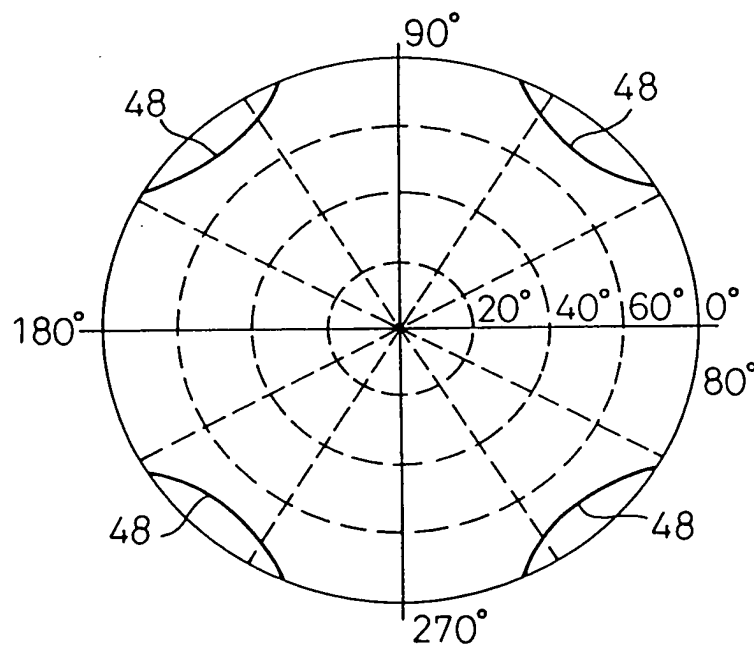


Fig.29



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Fig.30

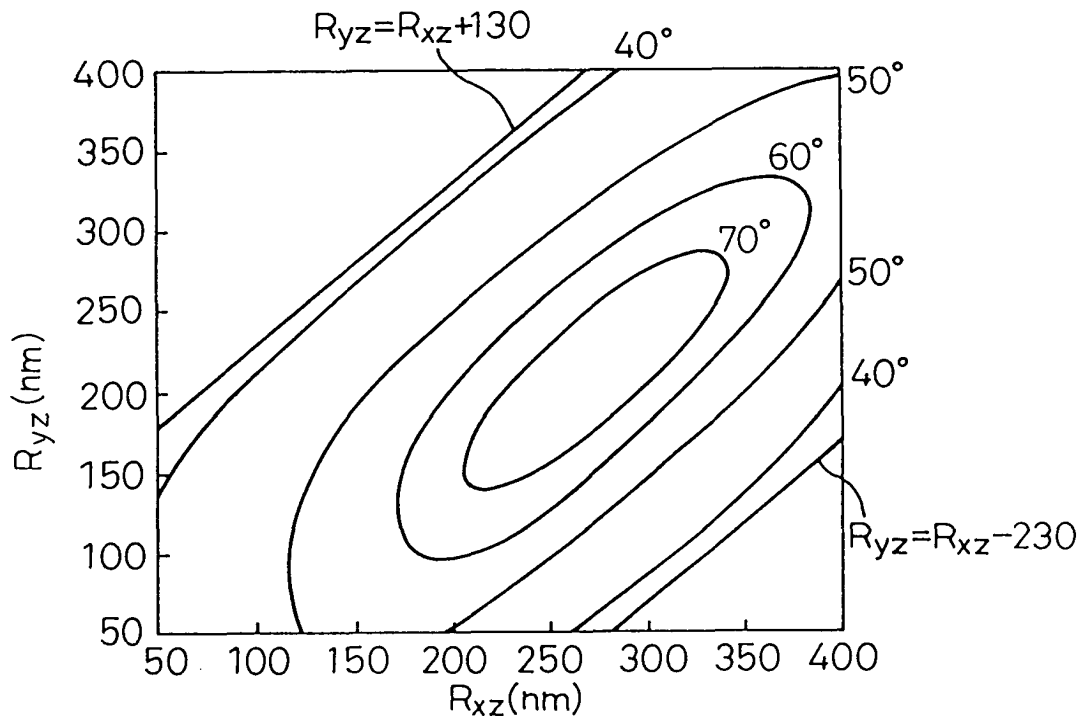
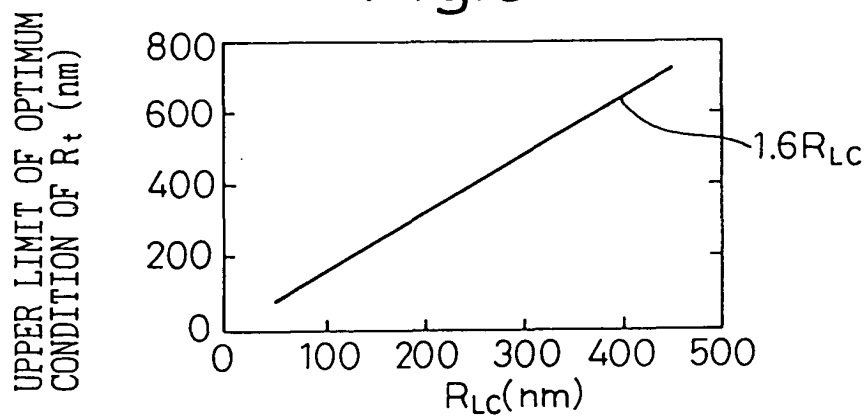


Fig.31



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Fig.32

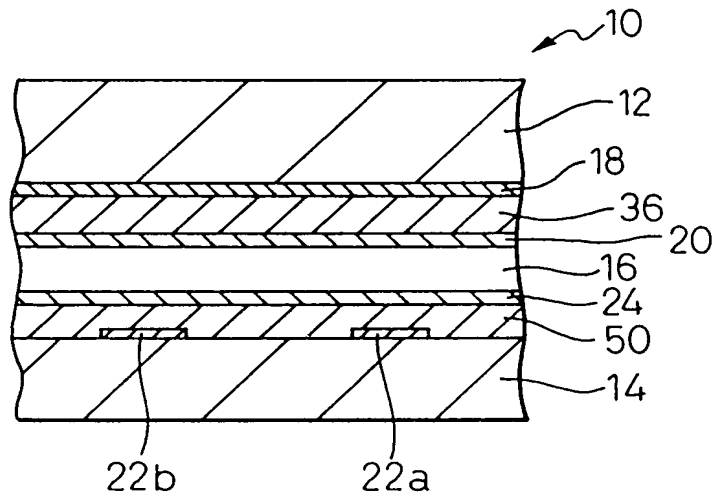
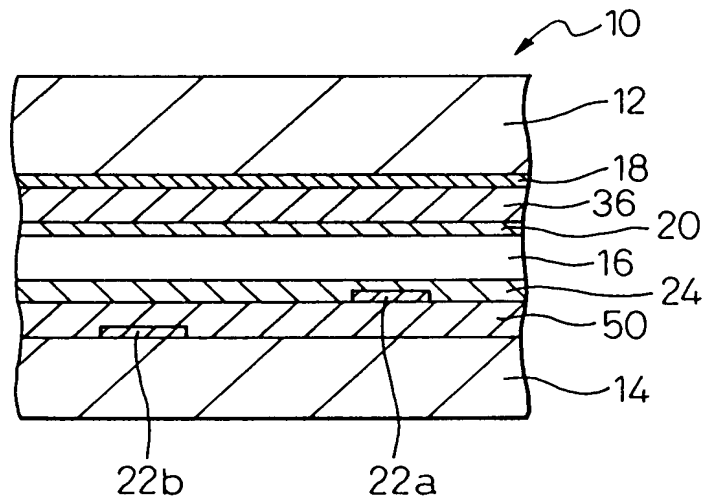


Fig.33



A cross-sectional view of a multi-layered structure 10. The structure consists of several layers: a top layer 12, a middle layer 18, a bottom layer 16, and a base layer 14. The middle layer 18 is divided into two sub-layers 20 and 22. The bottom layer 16 is divided into two sub-layers 24 and 26. The base layer 14 is divided into two sub-layers 28 and 30. The layers 12, 18, and 16 are shown with diagonal hatching, while the base layer 14 is shown with a cross-hatch pattern. The sub-layers 20, 22, 24, and 26 are shown with a different hatching pattern. The labels 22b and 22a are positioned below the middle layer 18, indicating specific regions or features.

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Fig.36A

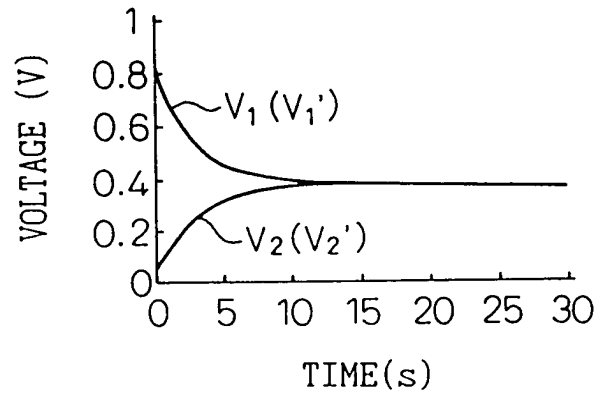


Fig.36B

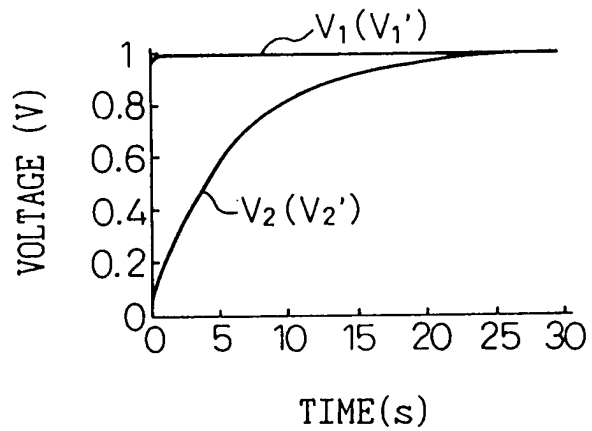
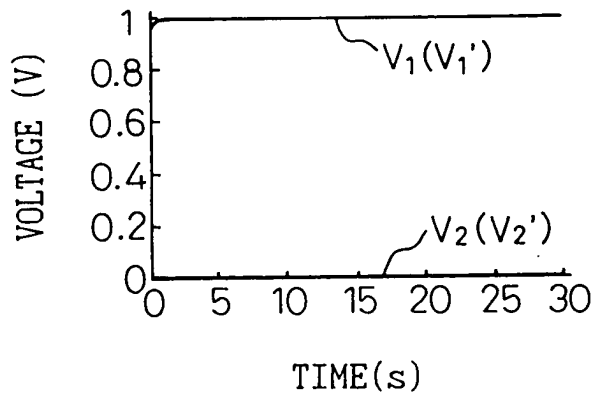


Fig.36C



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Fig.37A

$$VR_{LC}=10^8 \Omega m$$

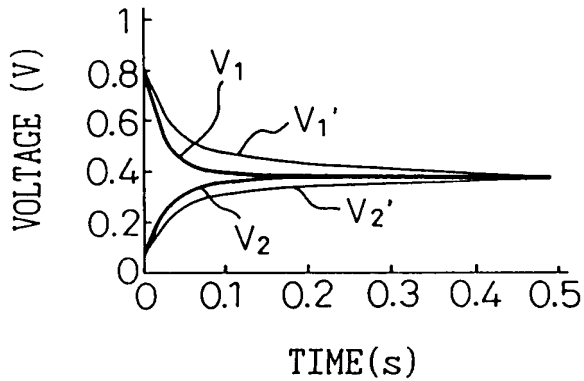


Fig.37D

$$VR_{LC}=10^{11} \Omega m$$

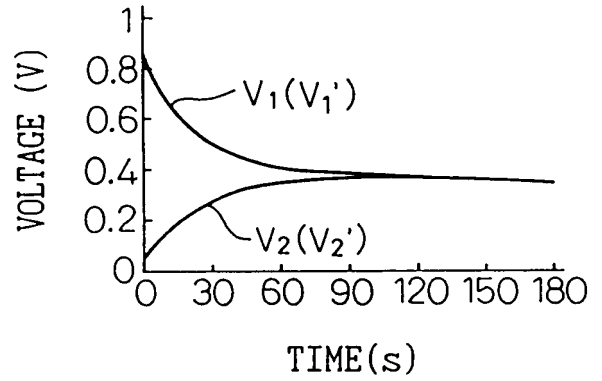


Fig.37B

$$VR_{LC}=10^9 \Omega m$$

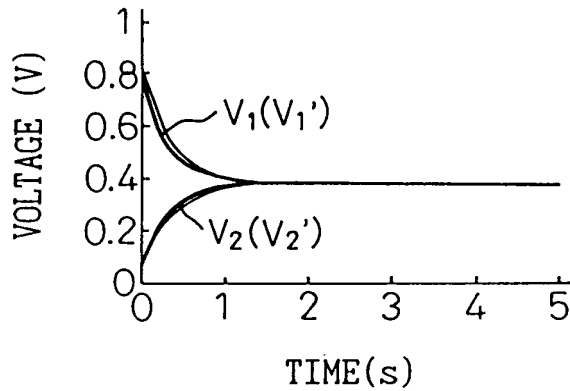


Fig.37E

$$VR_{LC}=10^{12} \Omega m$$

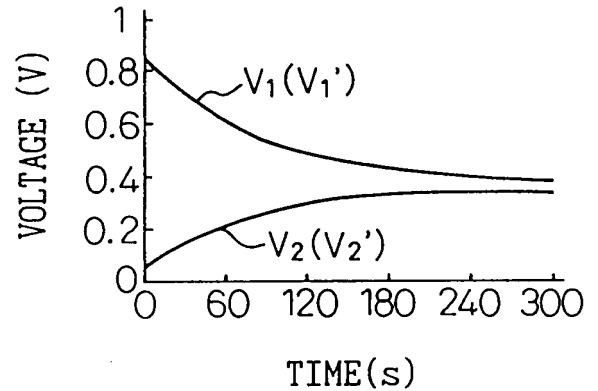


Fig.37C

$$VR_{LC}=10^{10} \Omega m$$

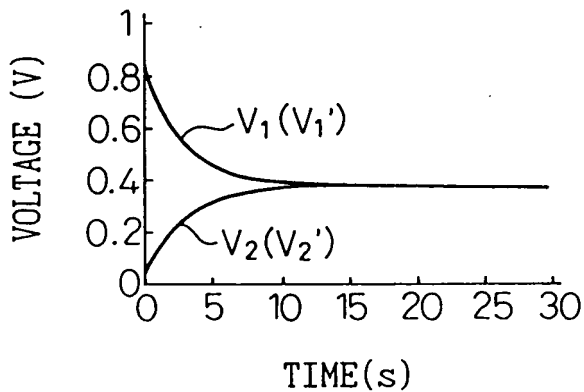
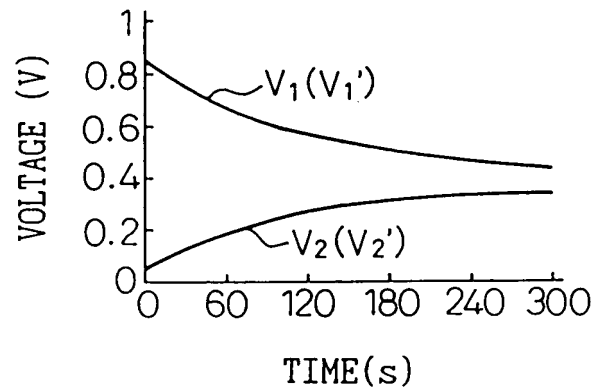


Fig.37F

$$VR_{LC}=10^{13} \Omega m$$



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Fig.38A

$$VR_{LC} = 10^8 \Omega m$$

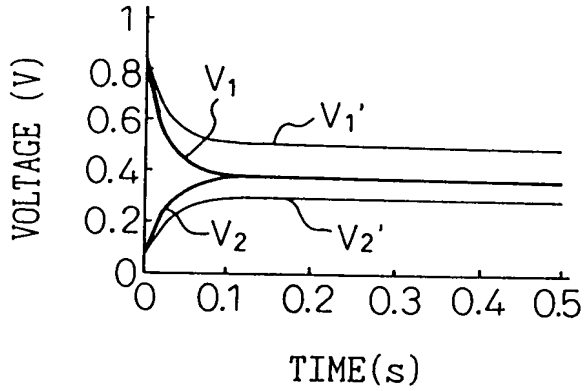


Fig.38D

$$VR_{LC} = 10^{11} \Omega m$$

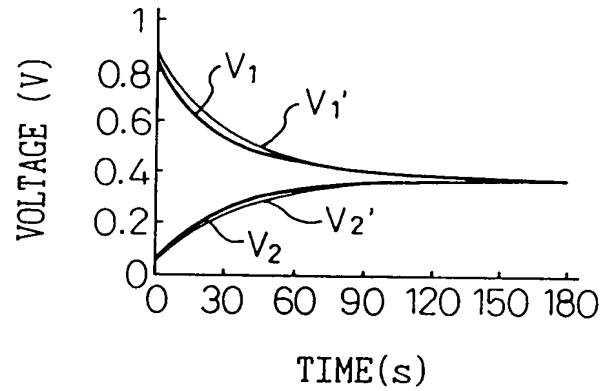


Fig.38B

$$VR_{LC} = 10^9 \Omega m$$

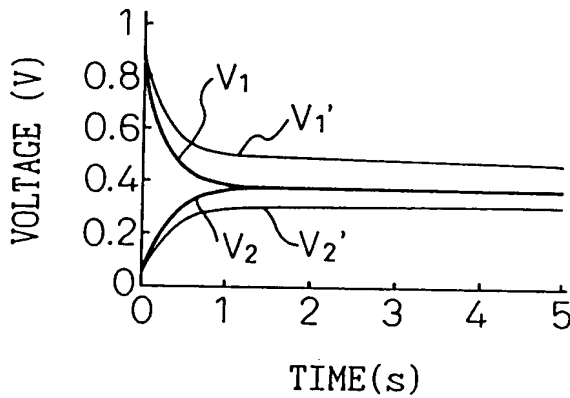


Fig.38E

$$VR_{LC} = 10^{12} \Omega m$$

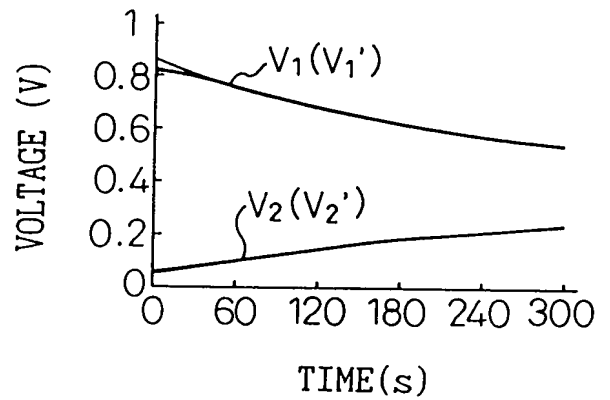


Fig.38C

$$VR_{LC} = 10^{10} \Omega m$$

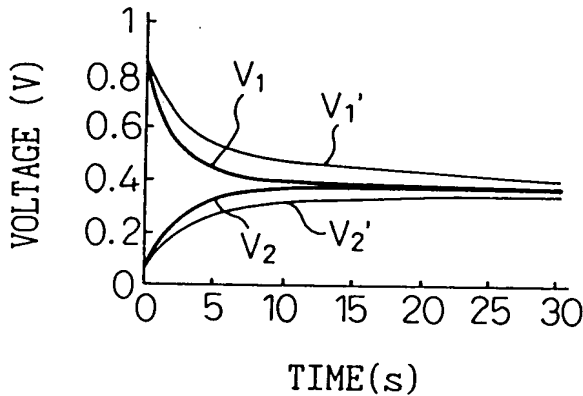
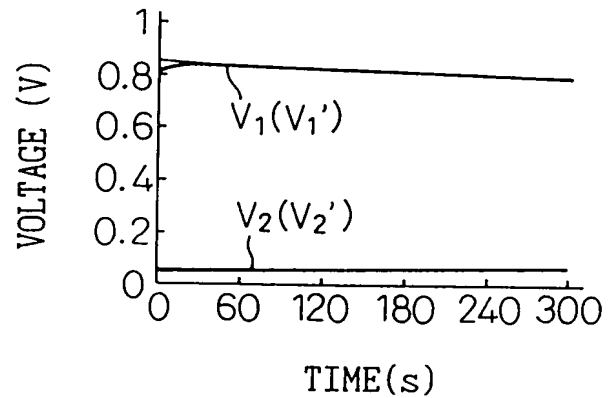


Fig.38F

$$VR_{LC} = 10^{13} \Omega m$$



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Fig.39A

$$VR_{LC}=10^8 \Omega m$$

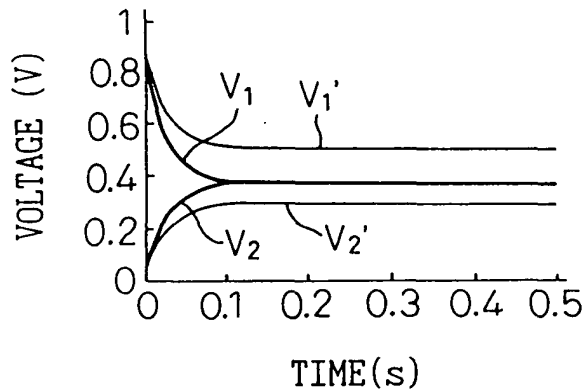


Fig.39D

$$VR_{LC}=10^{11} \Omega m$$

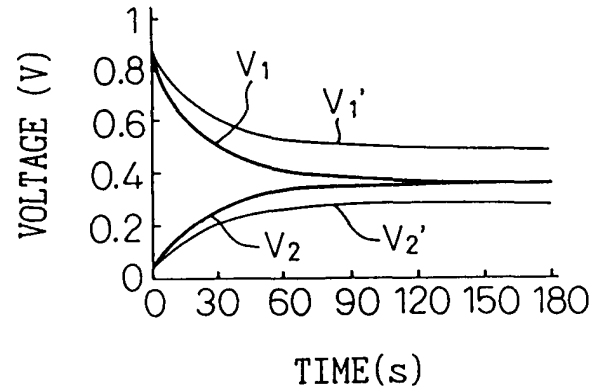


Fig.39B

$$VR_{LC}=10^9 \Omega m$$

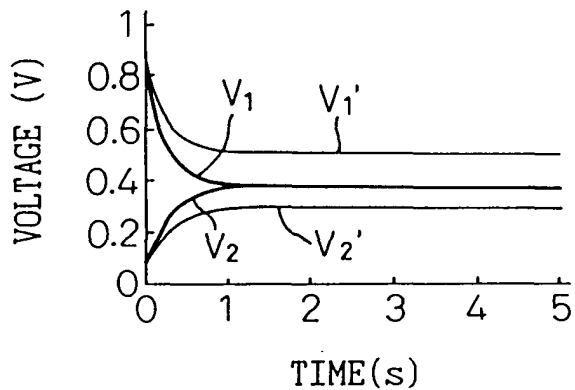


Fig.39E

$$VR_{LC}=10^{12} \Omega m$$

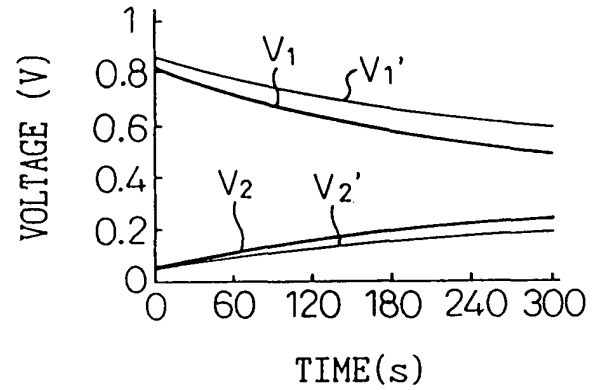


Fig.39C

$$VR_{LC}=10^{10} \Omega m$$

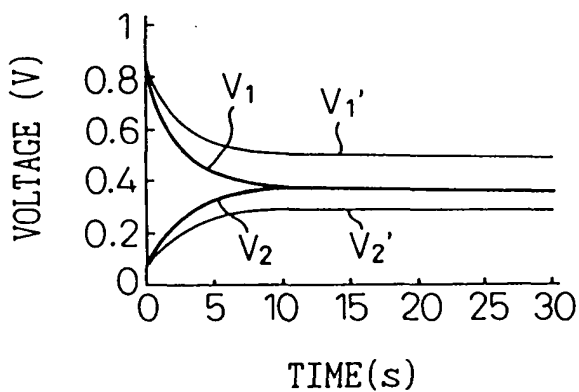
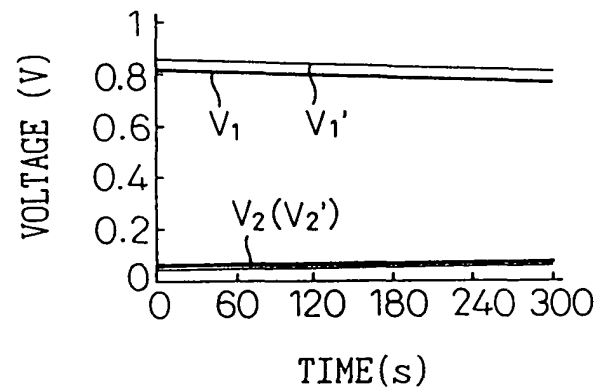


Fig.39F

$$VR_{LC}=10^{13} \Omega m$$



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Fig.40A

$$VR_{IN} = 10^{12} \Omega m$$

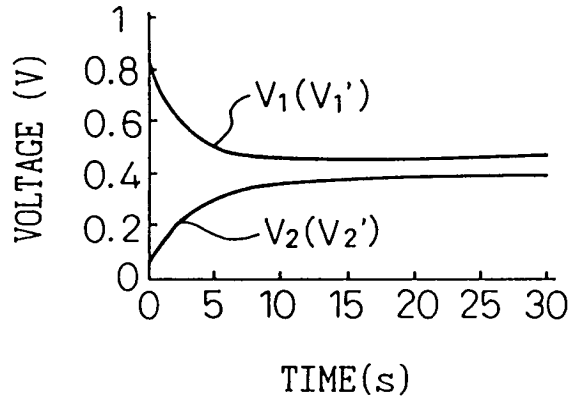


Fig.40C

$$VR_{IN} = 10^{14} \Omega m$$

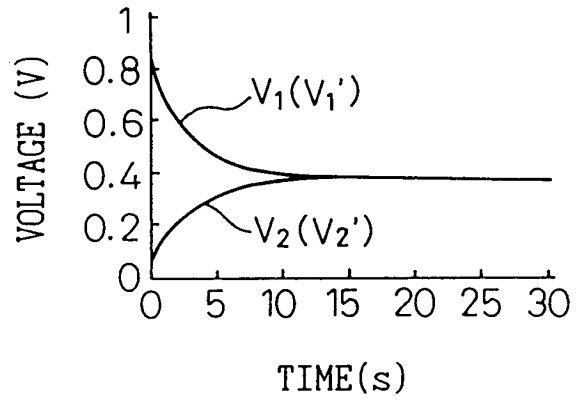


Fig.40B

$$VR_{IN} = 10^{13} \Omega m$$

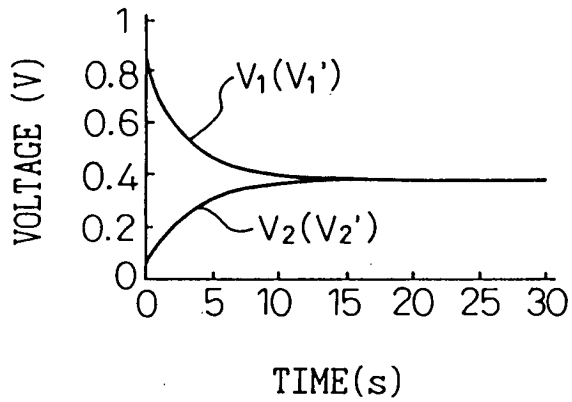
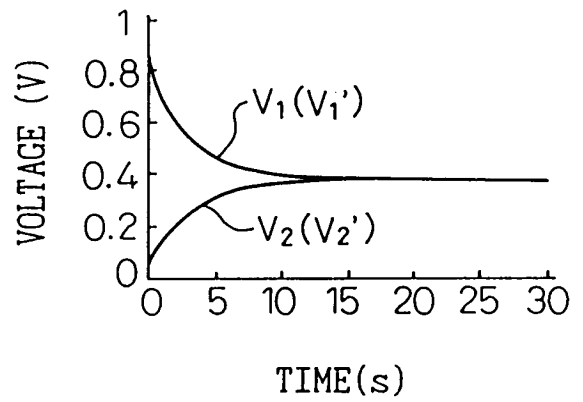


Fig.40D

$$VR_{IN} = 10^{16} \Omega m$$



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Fig.41A

$$VR_{IN}=10^{12}\Omega m$$

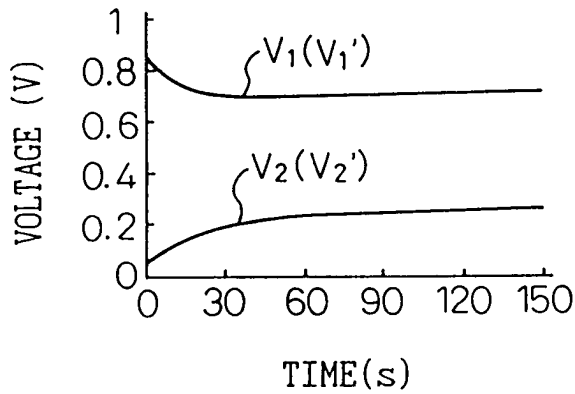


Fig.41C

$$VR_{IN}=10^{14}\Omega m$$

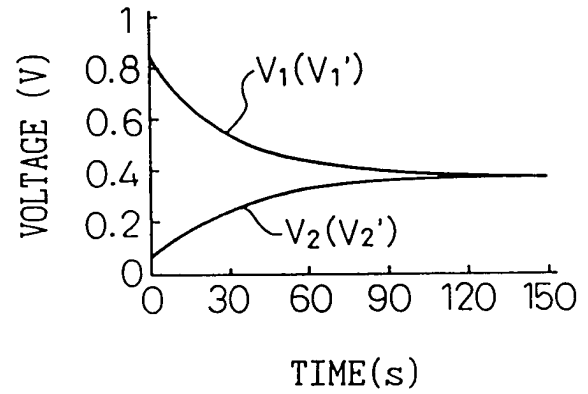


Fig.41B

$$VR_{IN}=10^{13}\Omega m$$

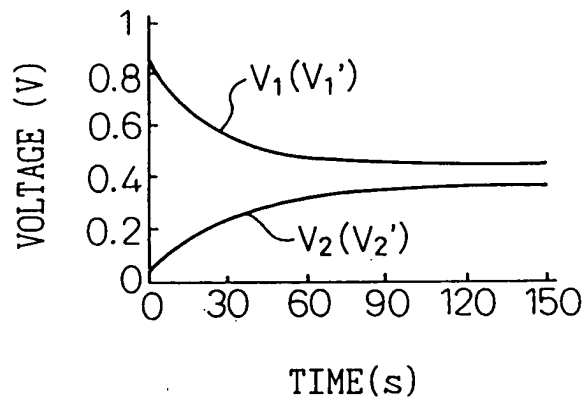
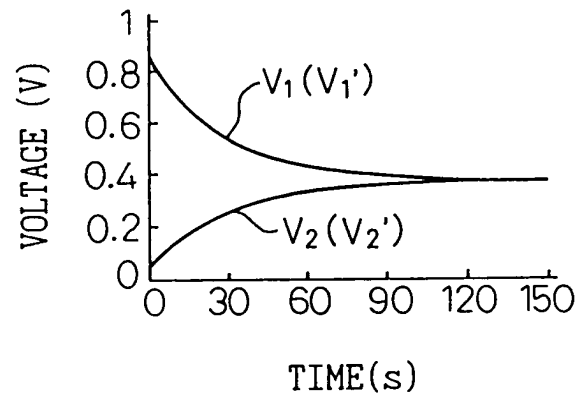


Fig.41D

$$VR_{IN}=10^{16}\Omega m$$



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Fig.42A

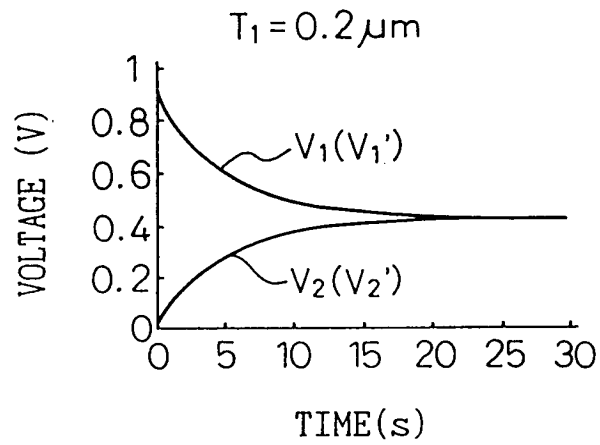


Fig.42B

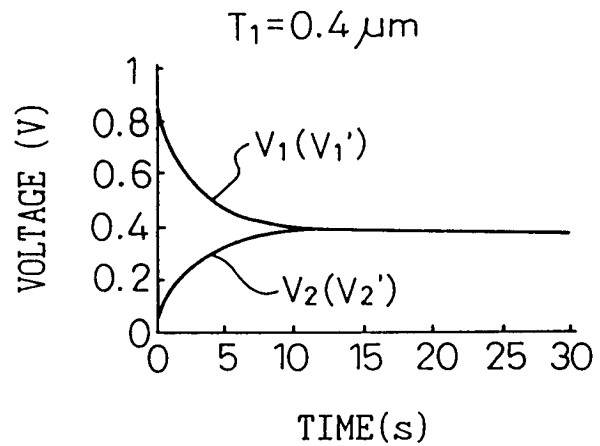
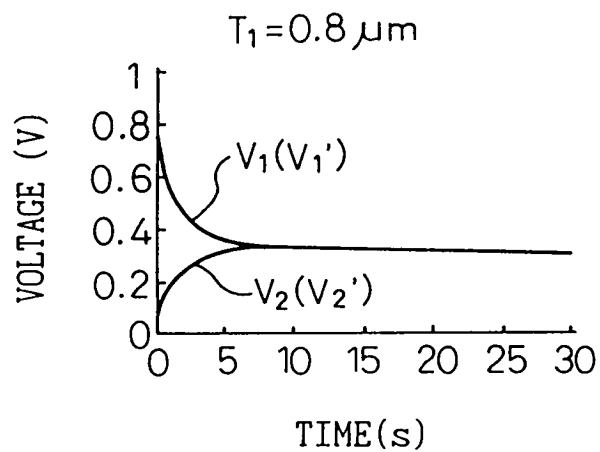


Fig.42C



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Fig.43

$T_2 = 0.4 \mu\text{m}$

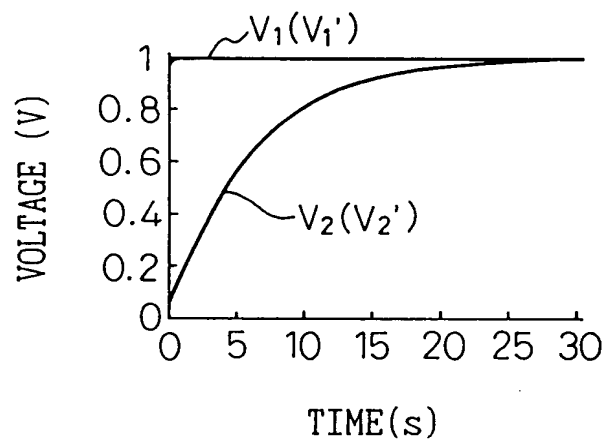
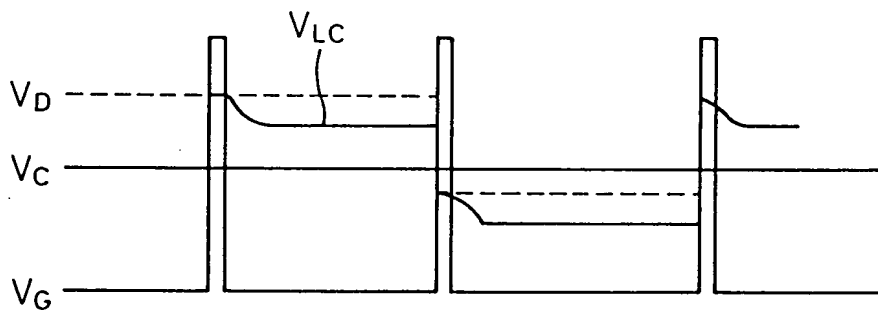
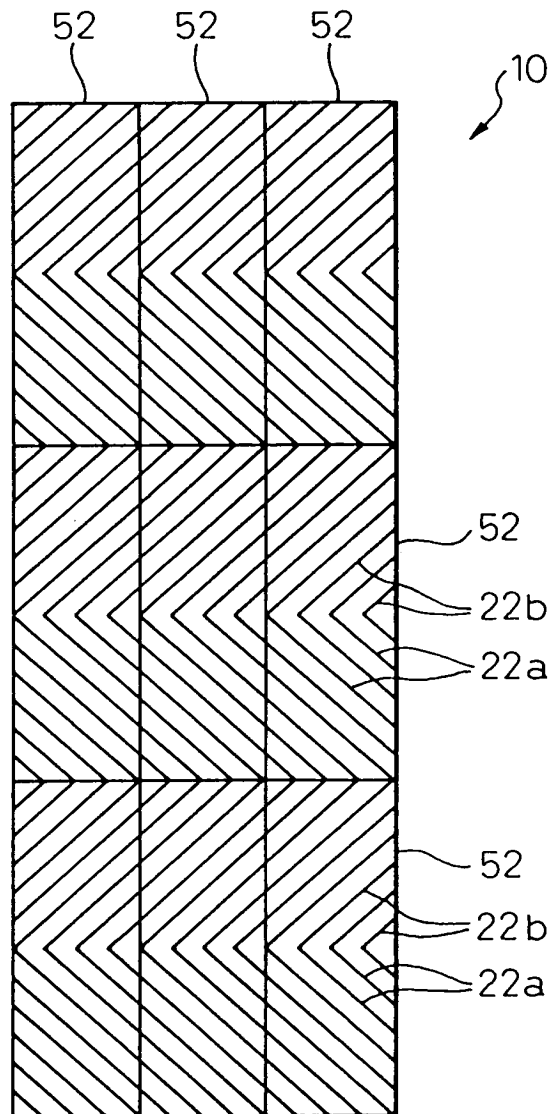


Fig.44



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Fig.45



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Fig.46A

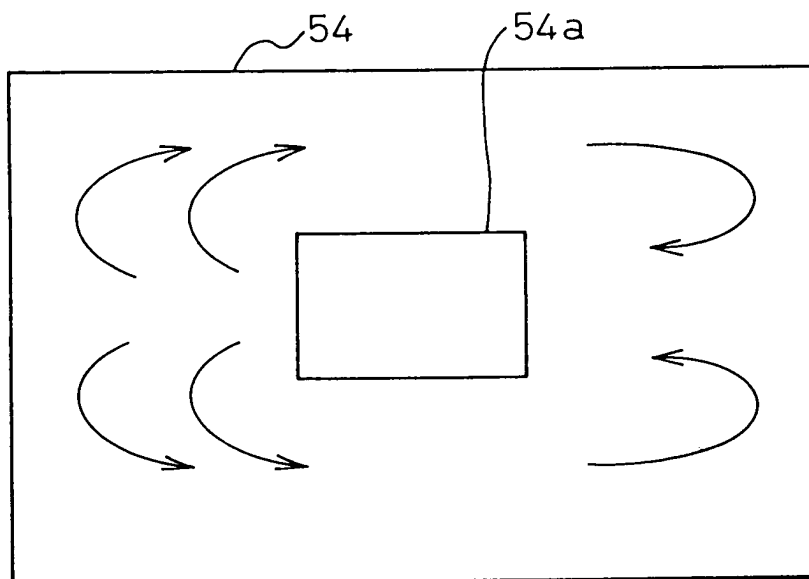
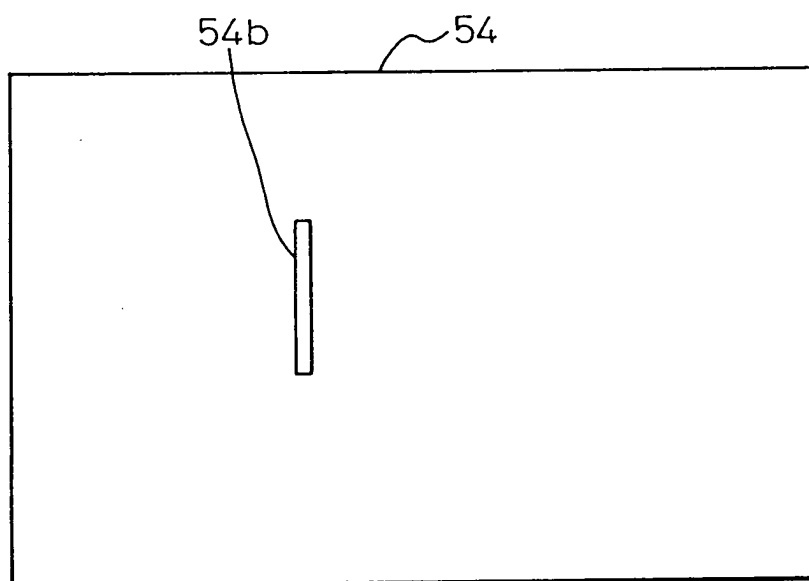
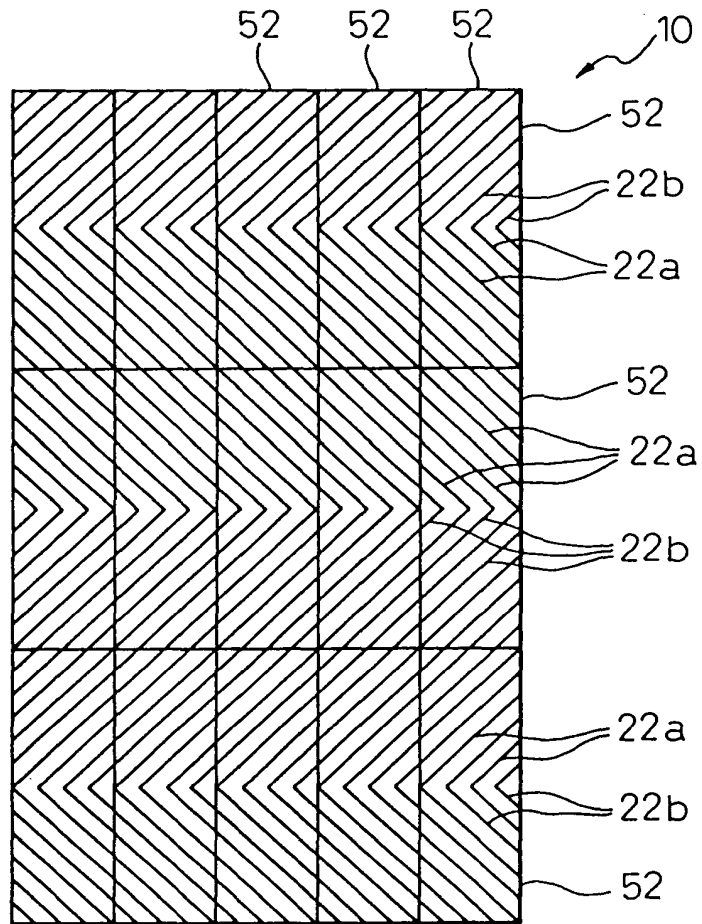


Fig.46B



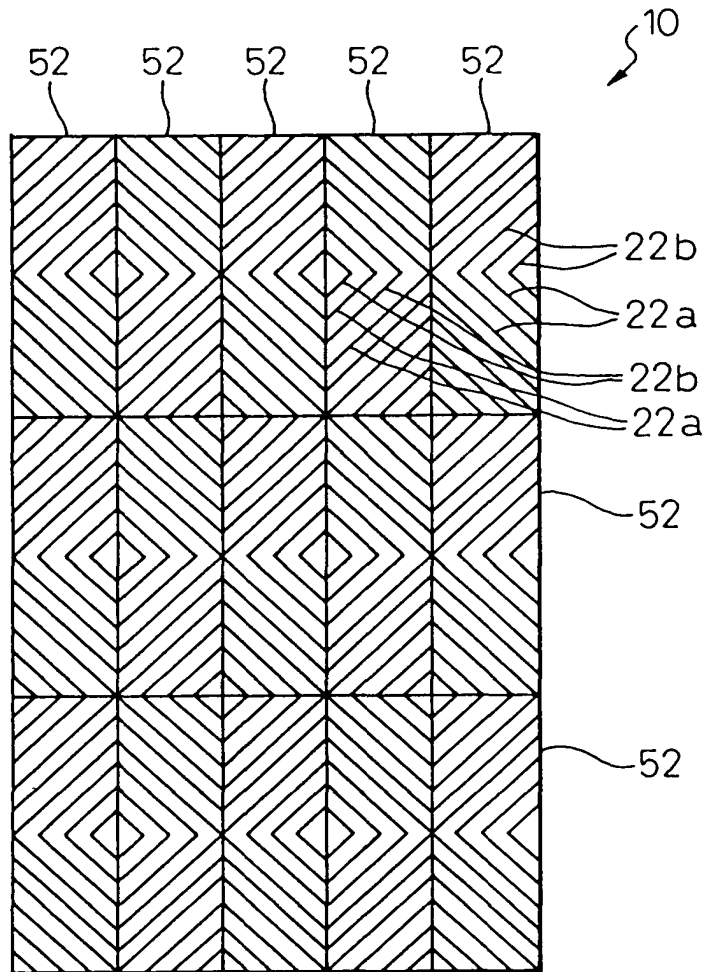
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Fig.47



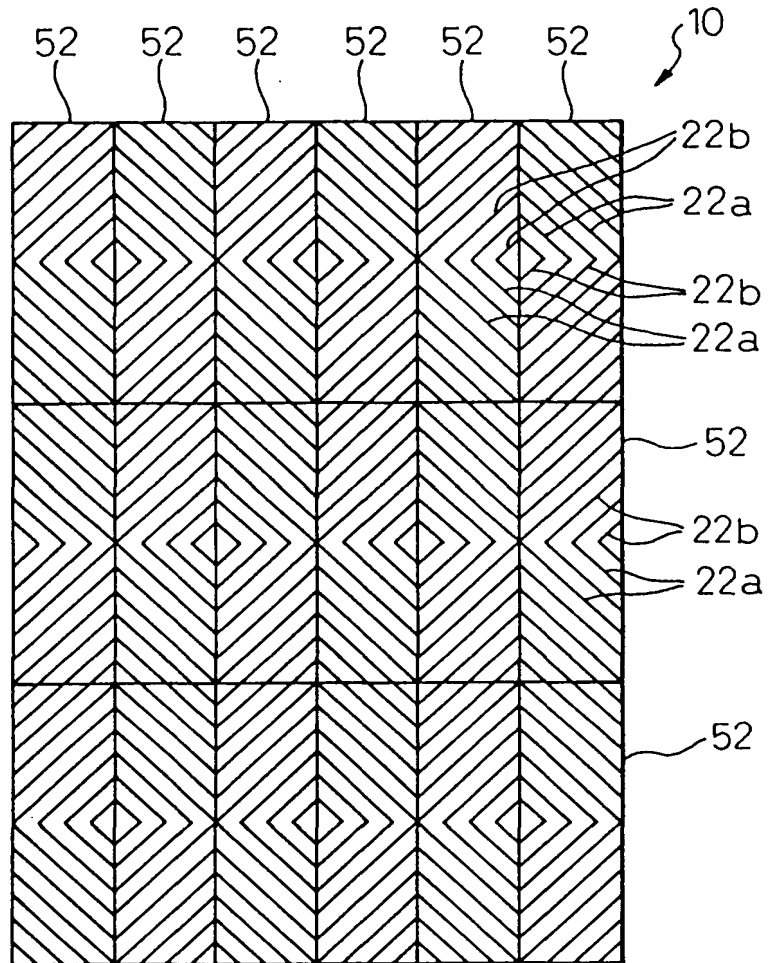
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Fig.48



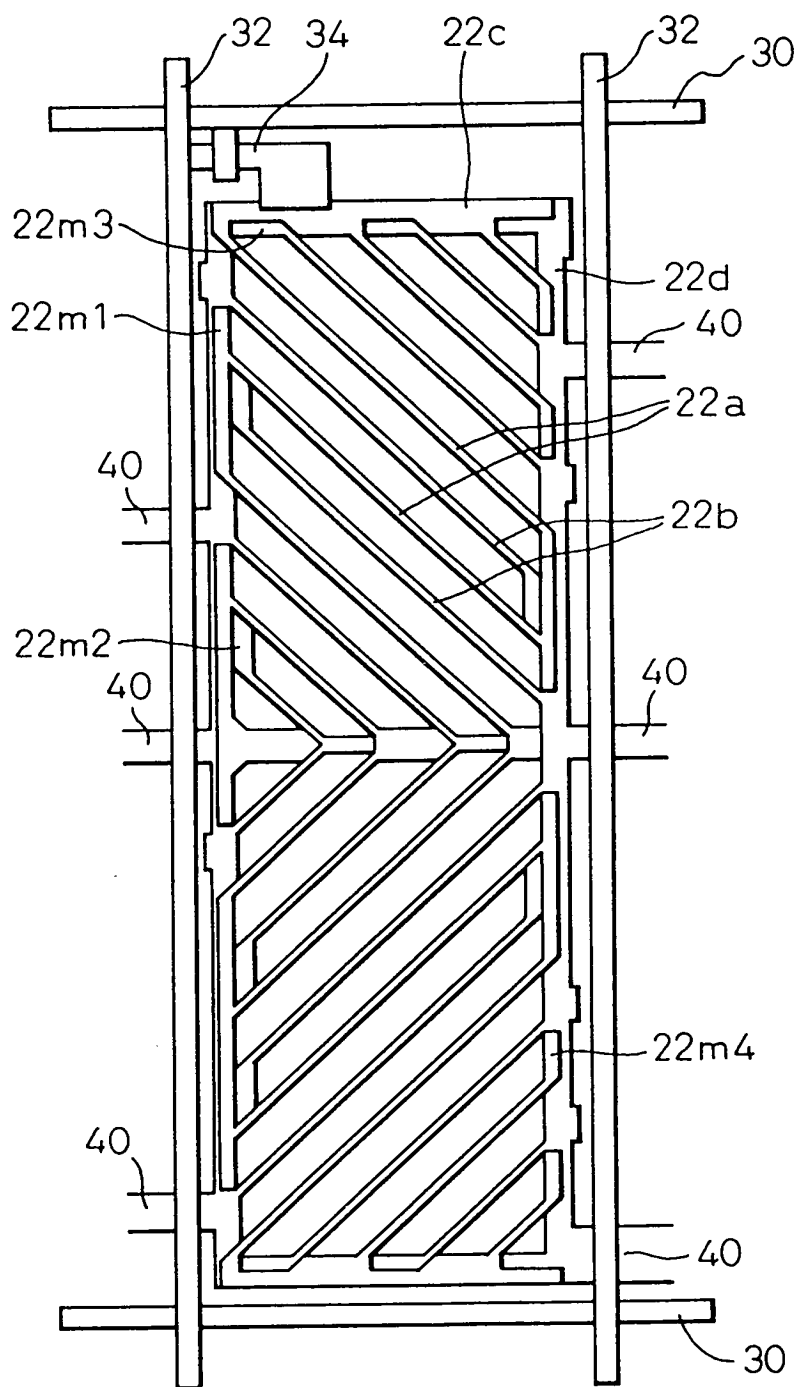
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Fig.49



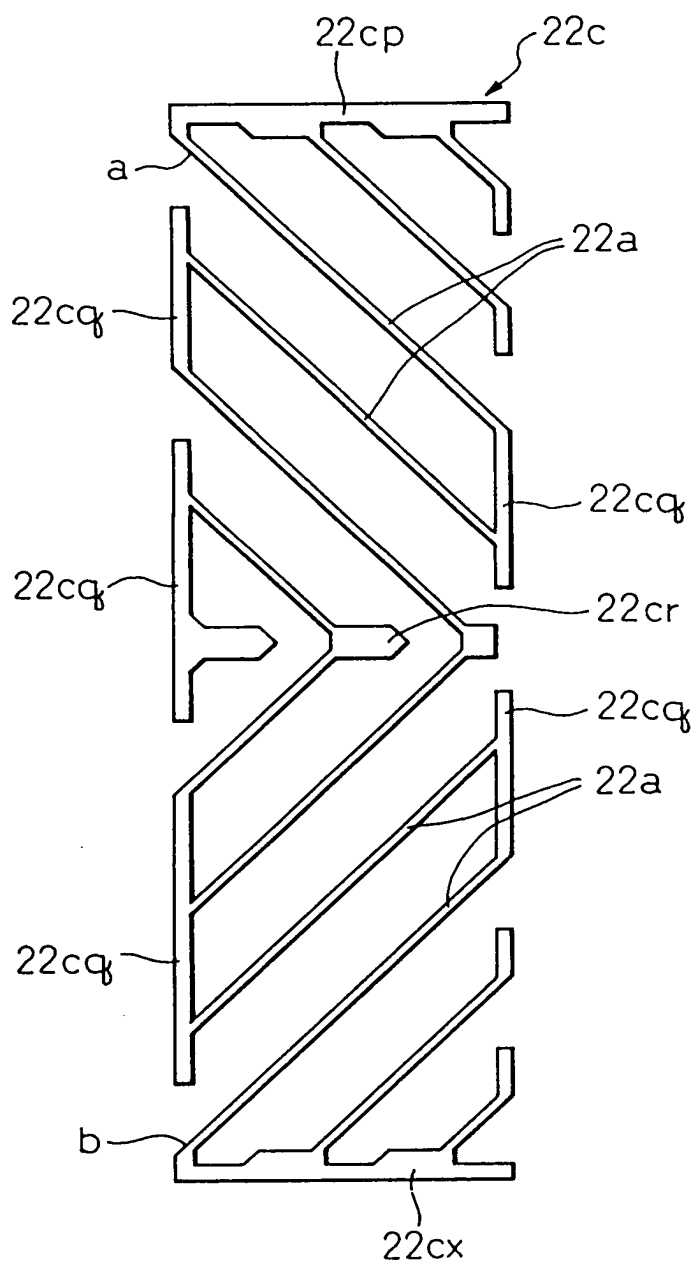
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Fig.50



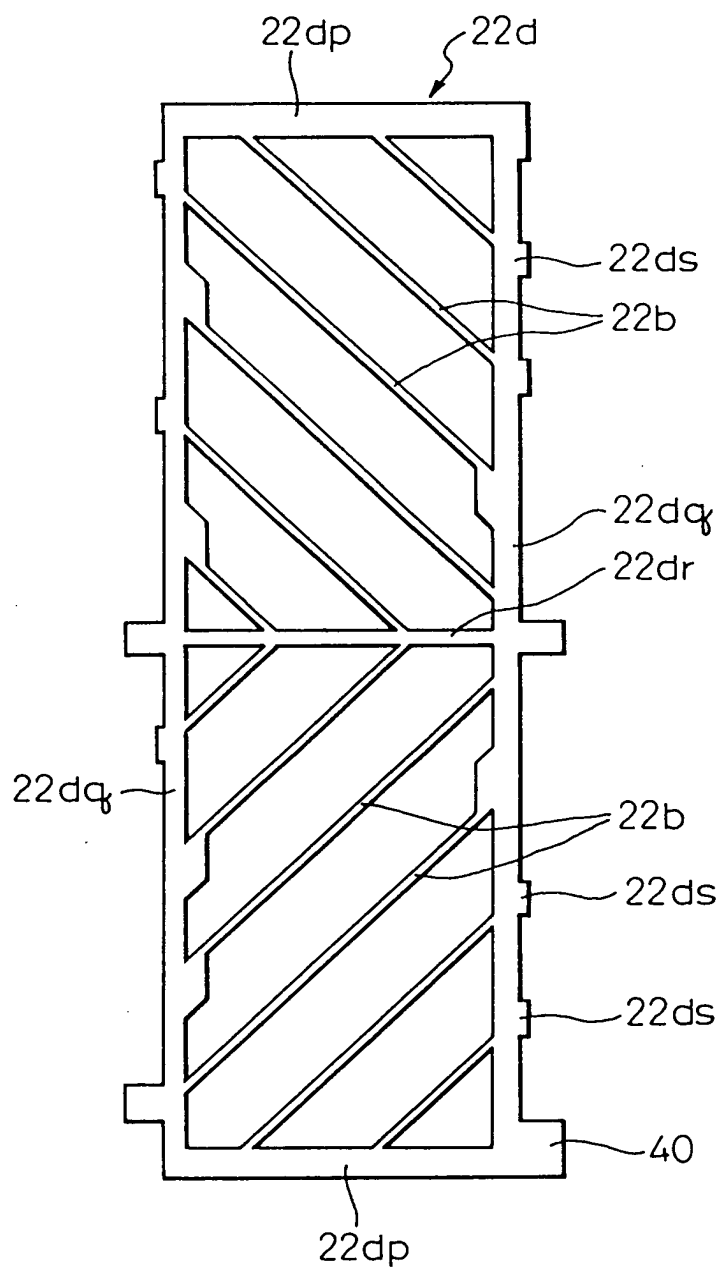
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Fig.51



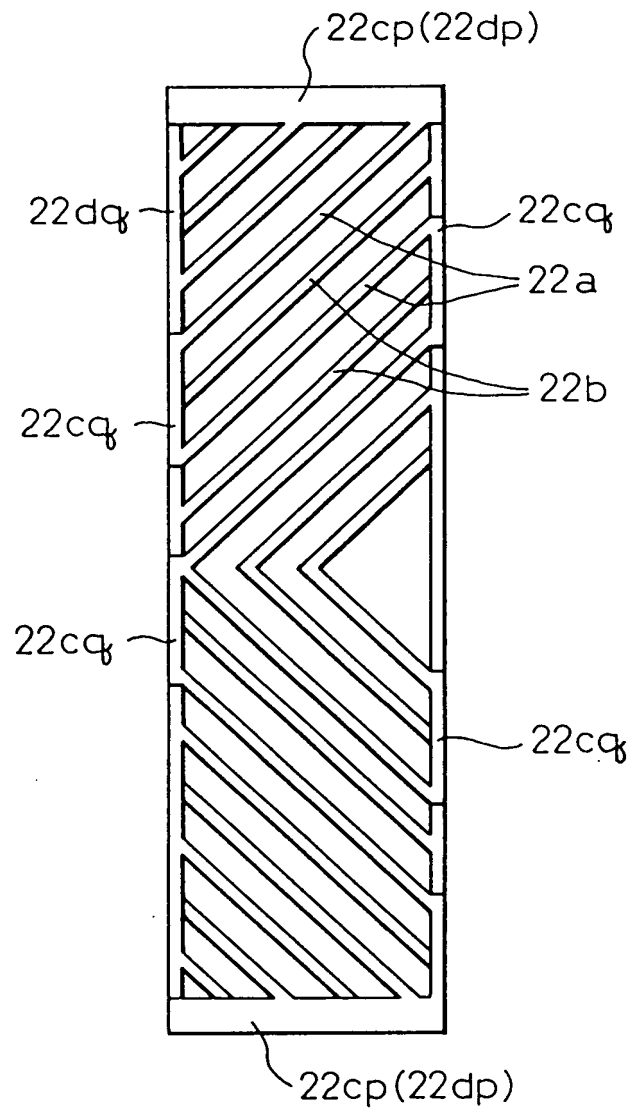
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106

Fig.52



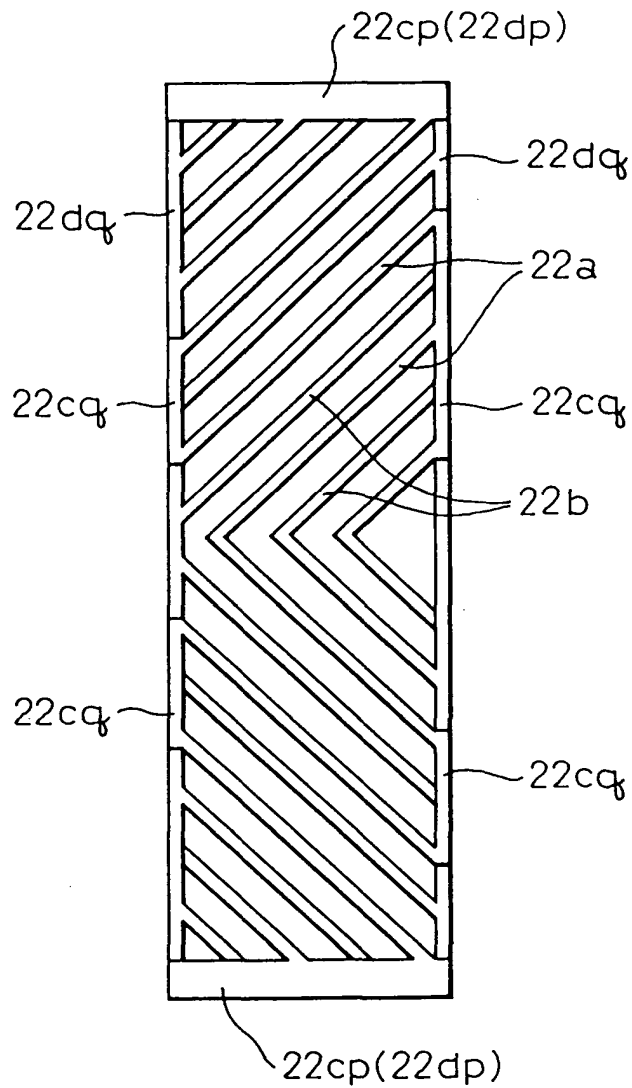
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Fig.53



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Fig. 54



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Fig.55A

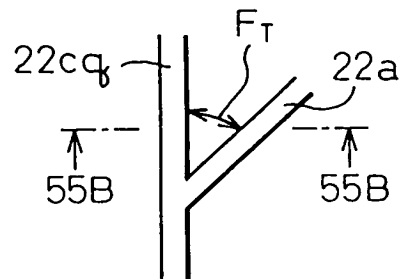


Fig.55B

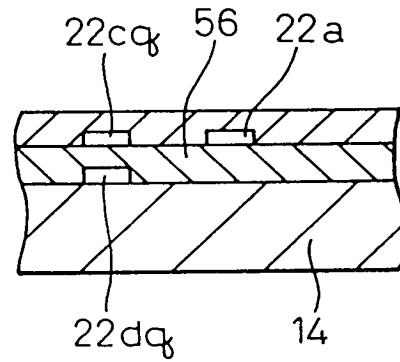


Fig.56A

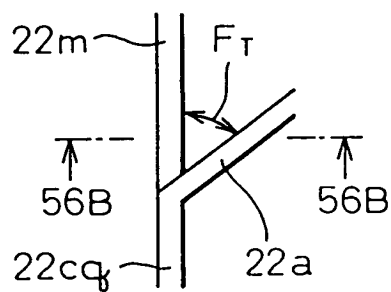
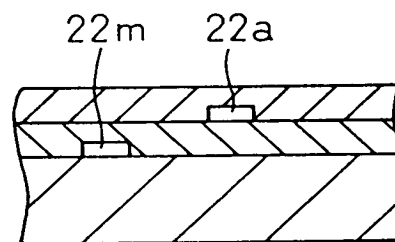
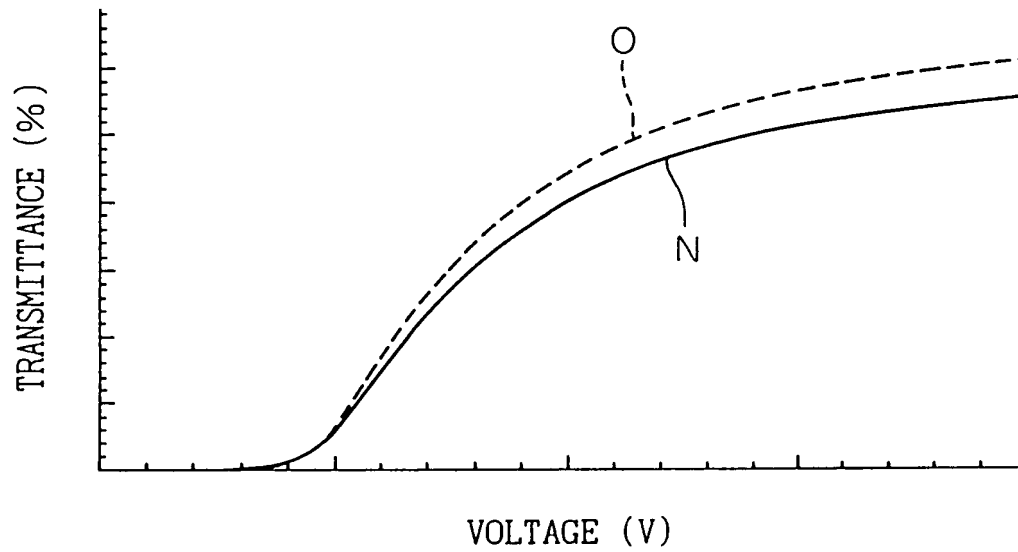


Fig.56B



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Fig.57



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Fig.58

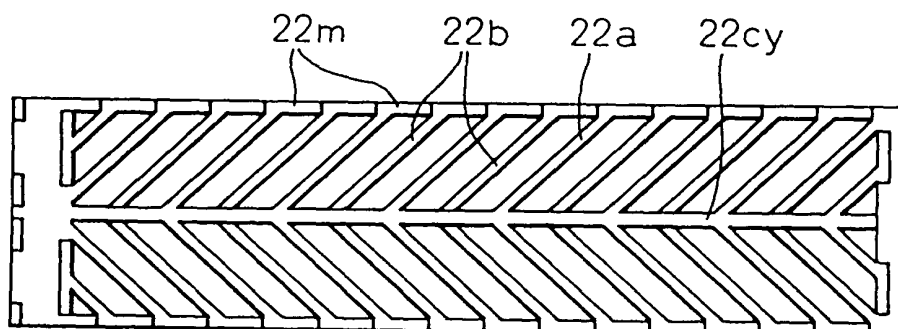
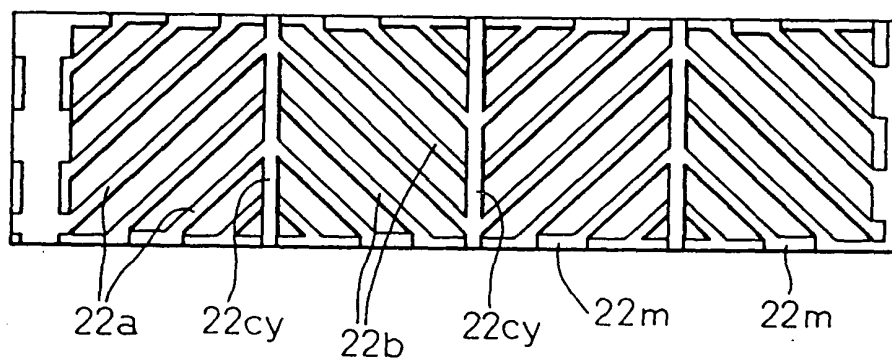


Fig.59



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Fig.60

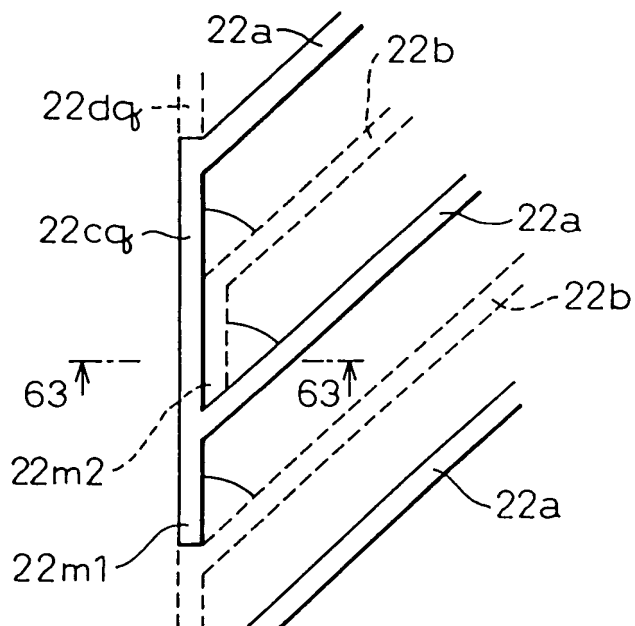
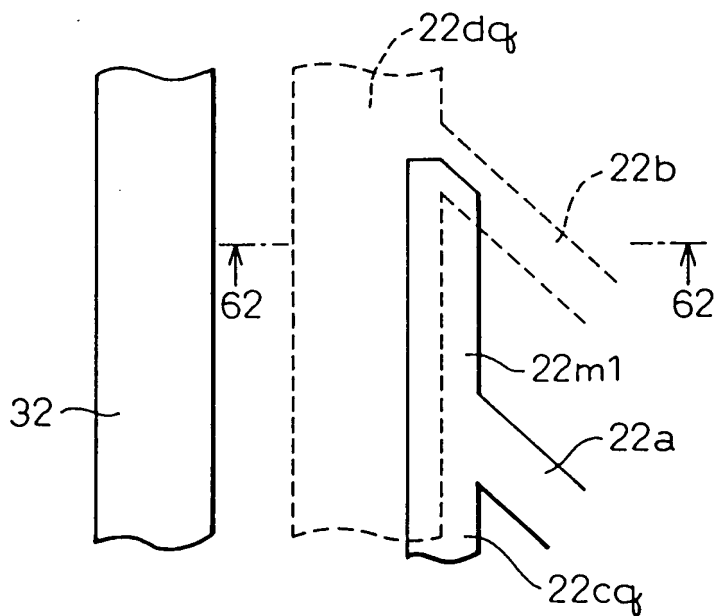


Fig.61



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Fig.62

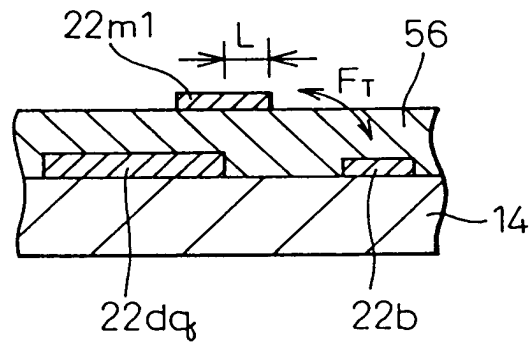
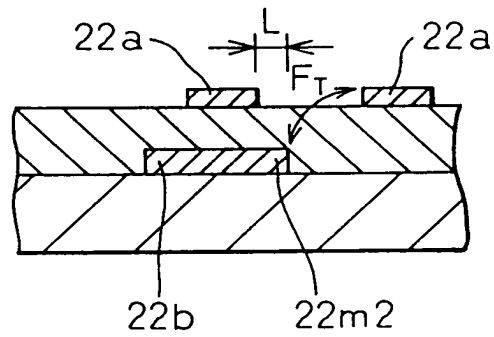


Fig.63



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Fig.64

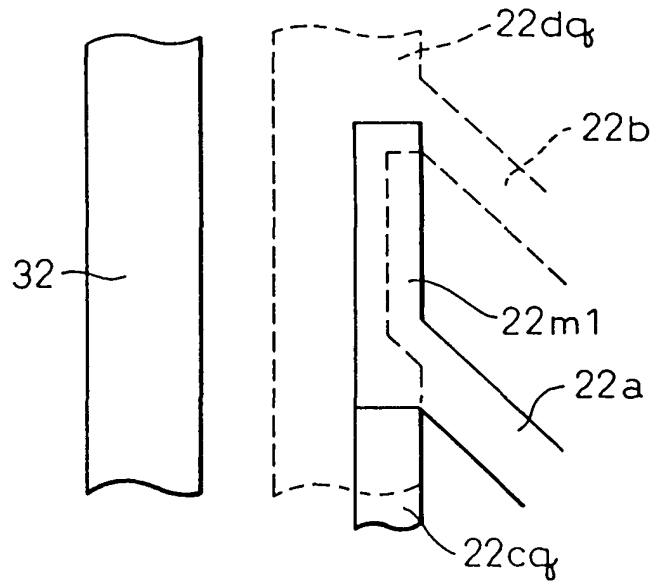
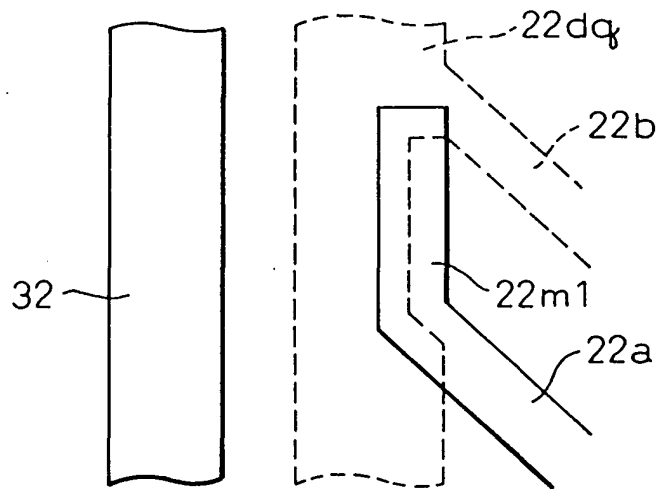
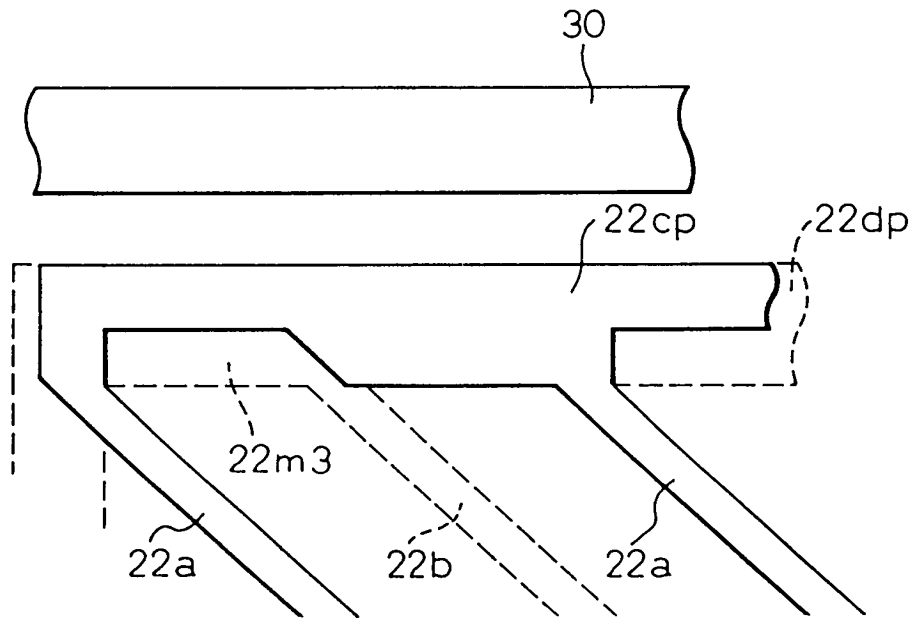


Fig.65



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Fig.66



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Fig.67

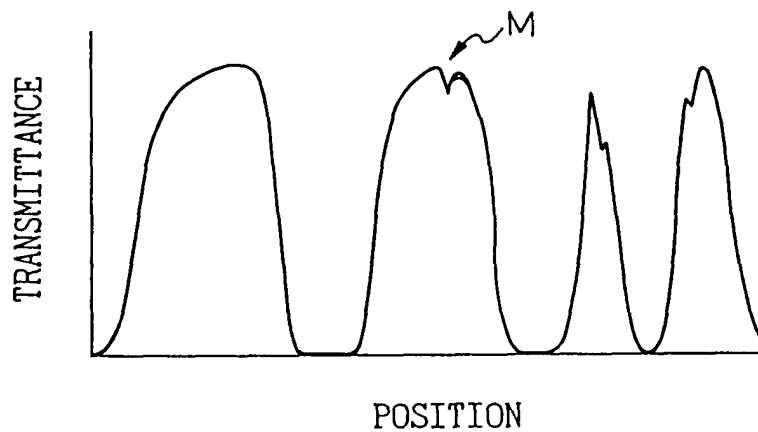
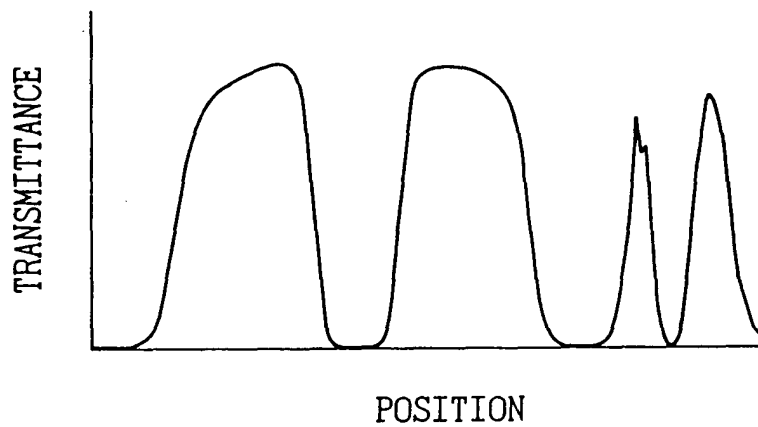


Fig.68



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106

Fig.69

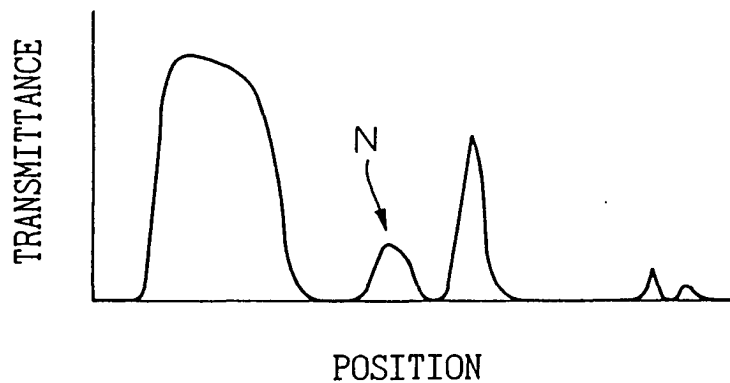
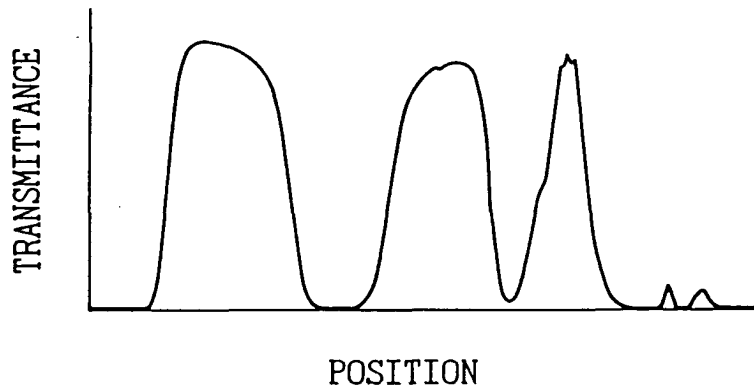
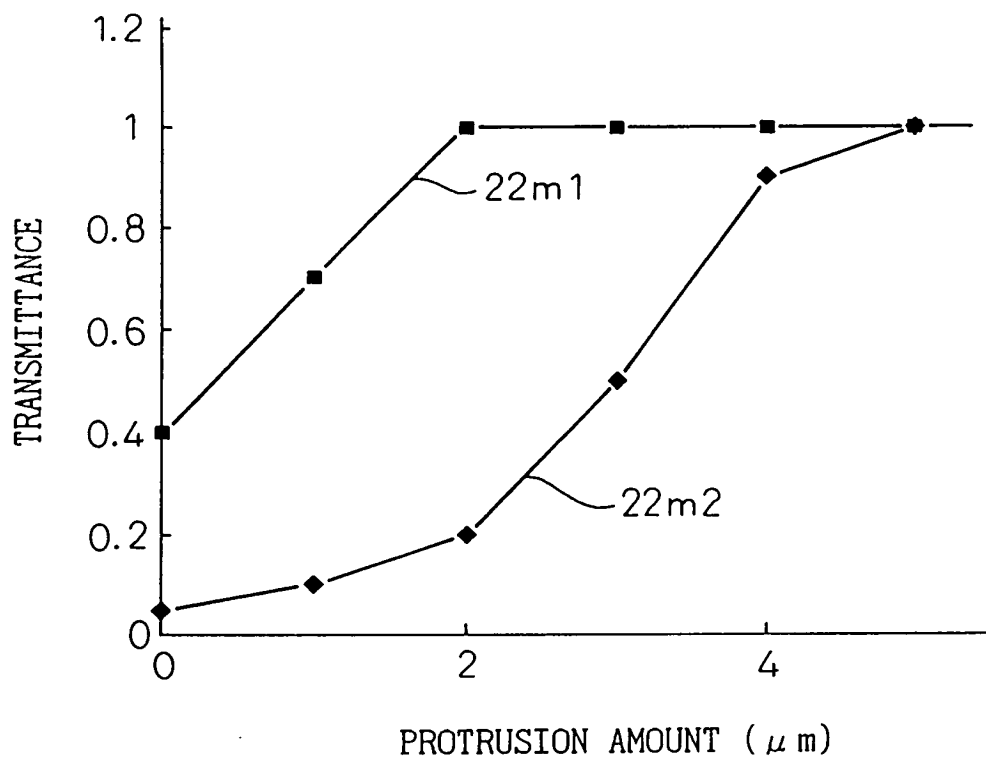


Fig.70



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Fig.71



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Fig.72

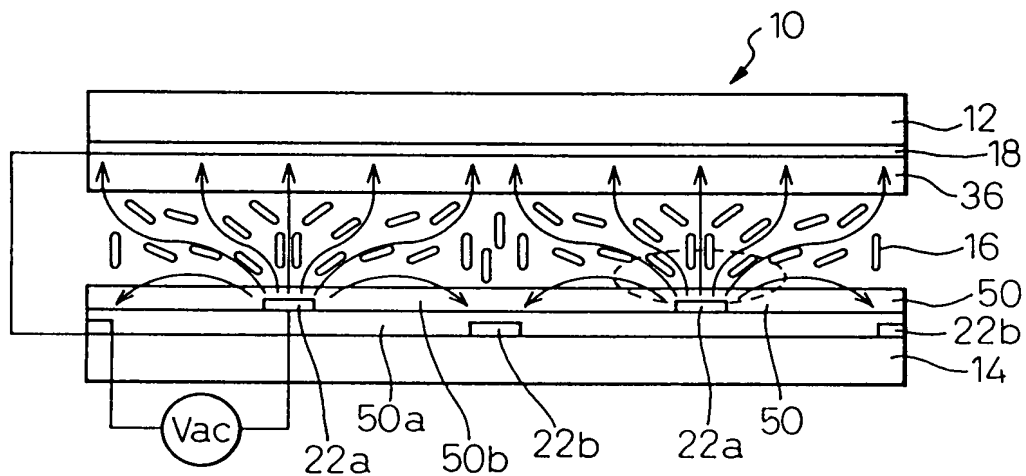
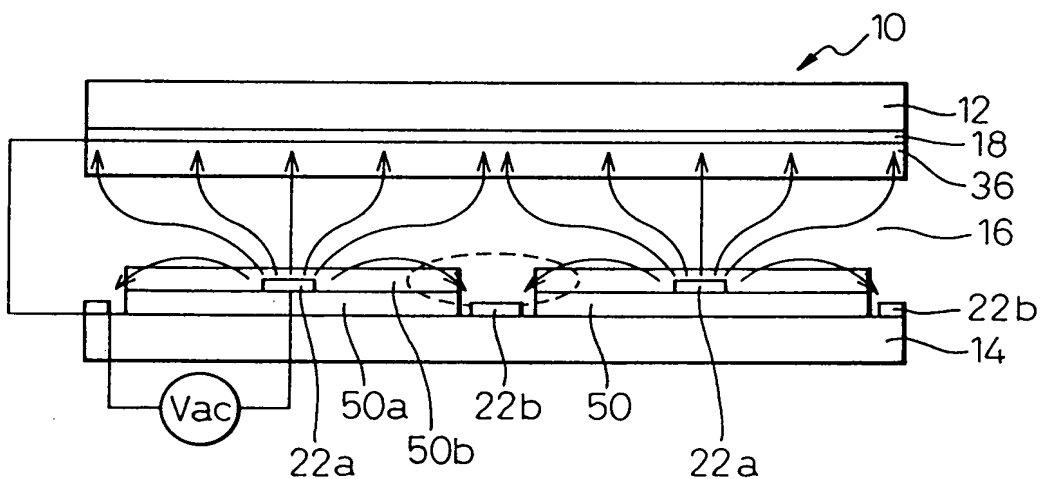


Fig.73



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Fig.74

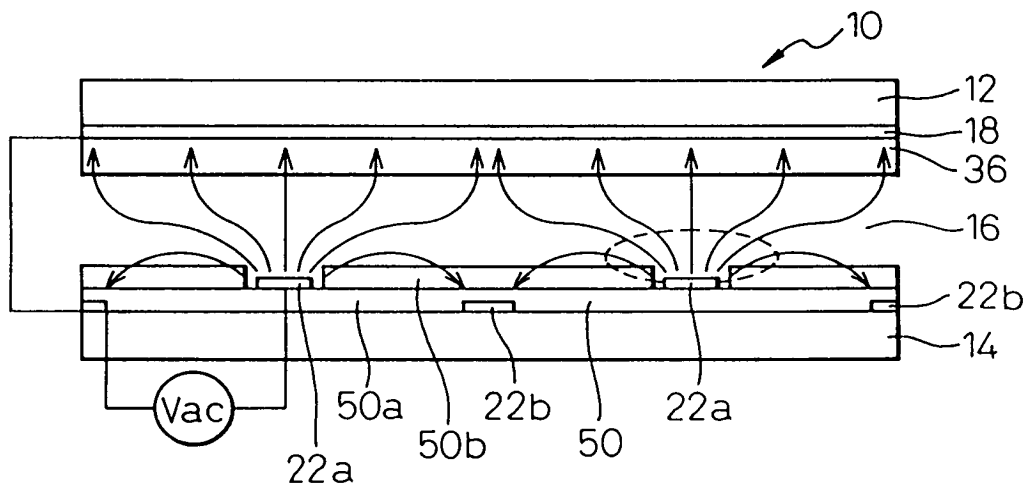
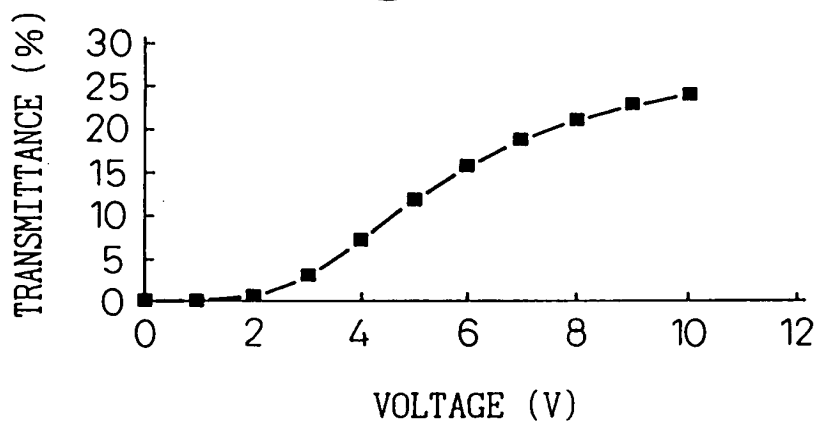


Fig.75



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Fig.76

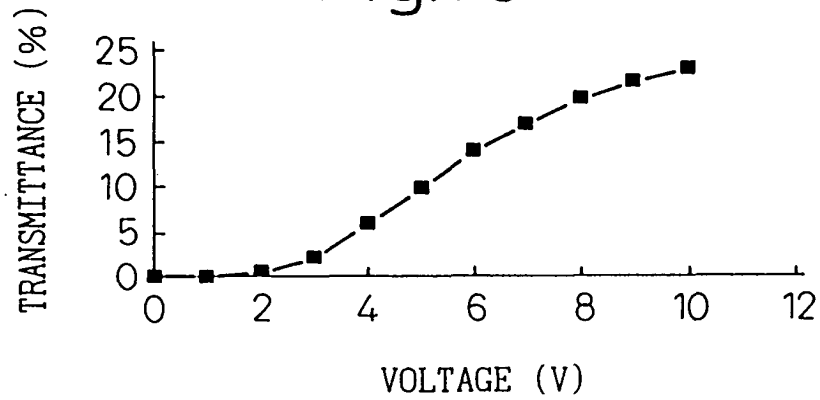


Fig.77

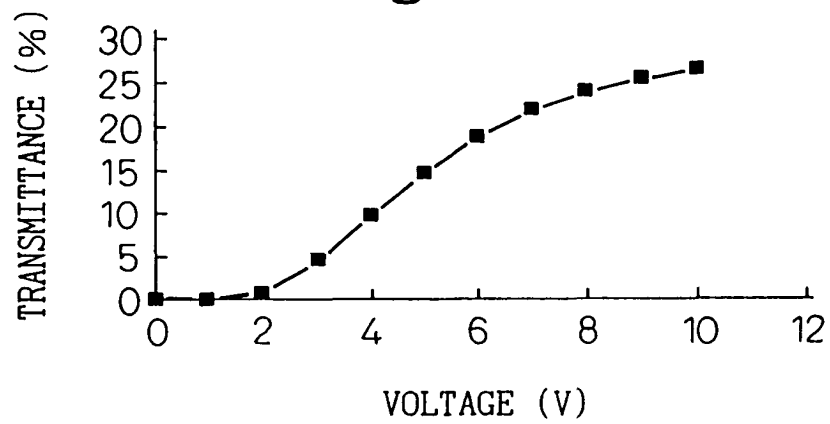
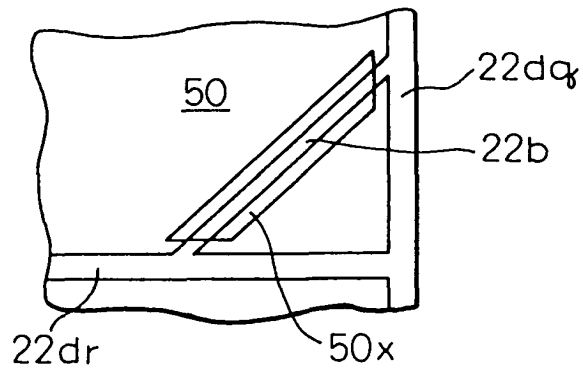


Fig.78



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Fig.79

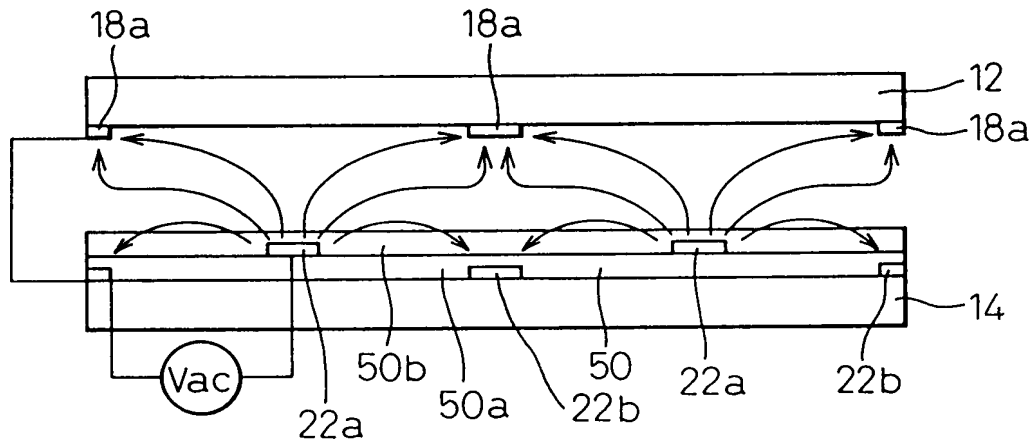
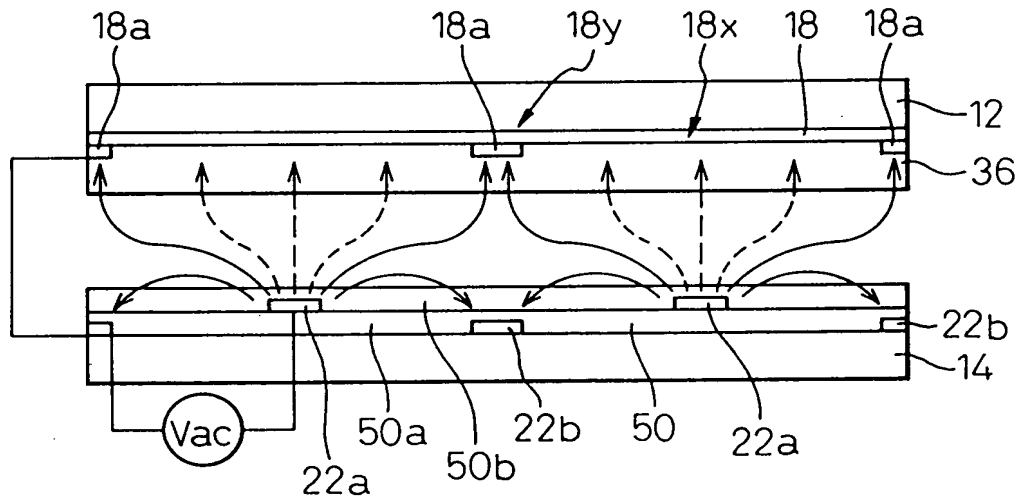


Fig.80



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Fig.81

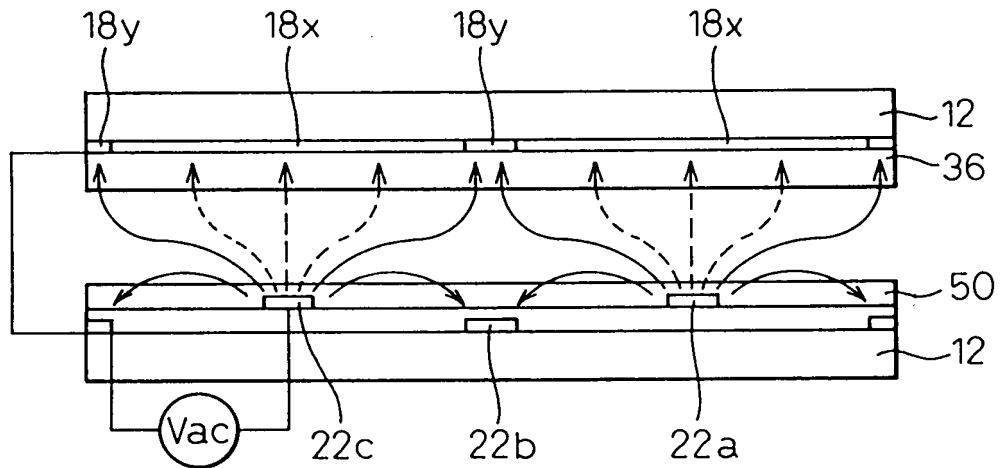
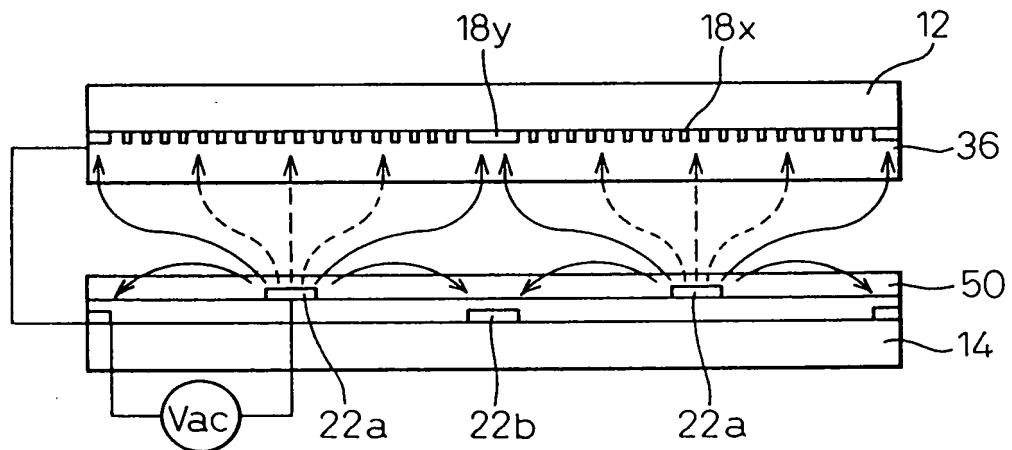


Fig.82



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Fig.83

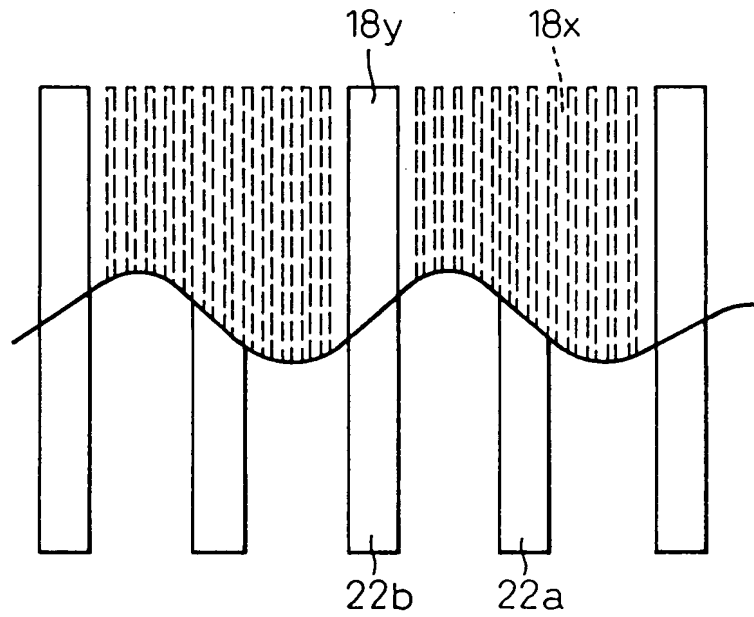
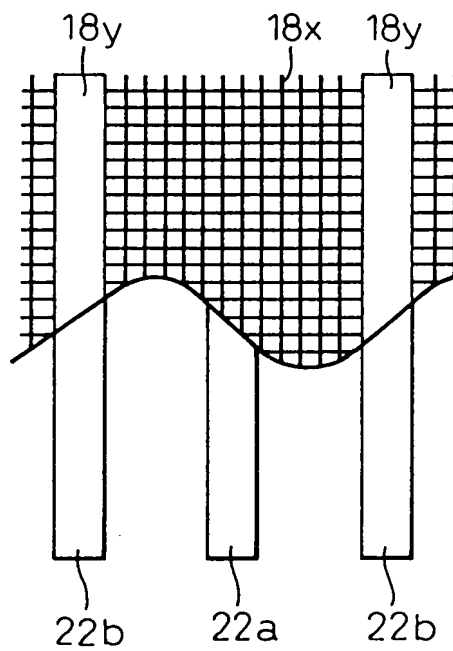


Fig.84



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Fig.85

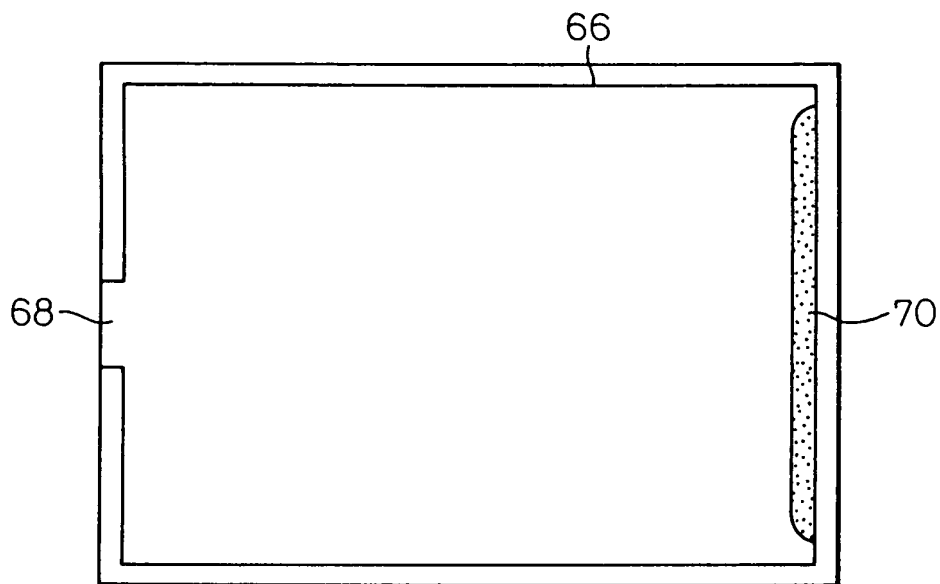
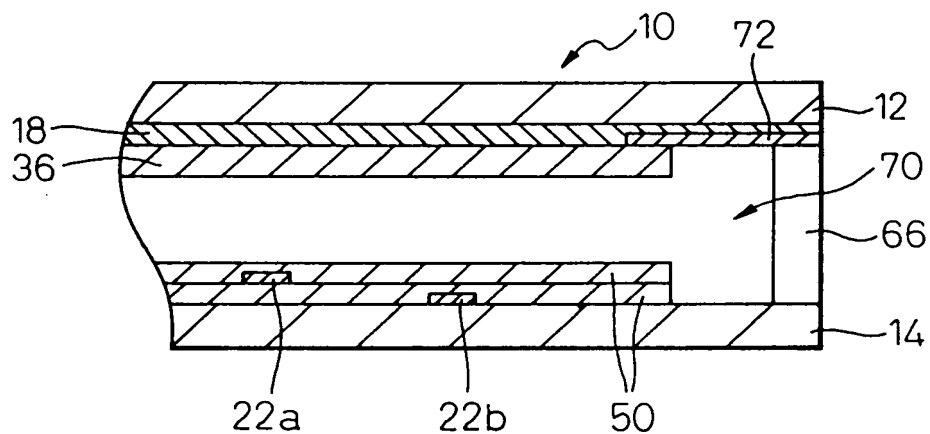
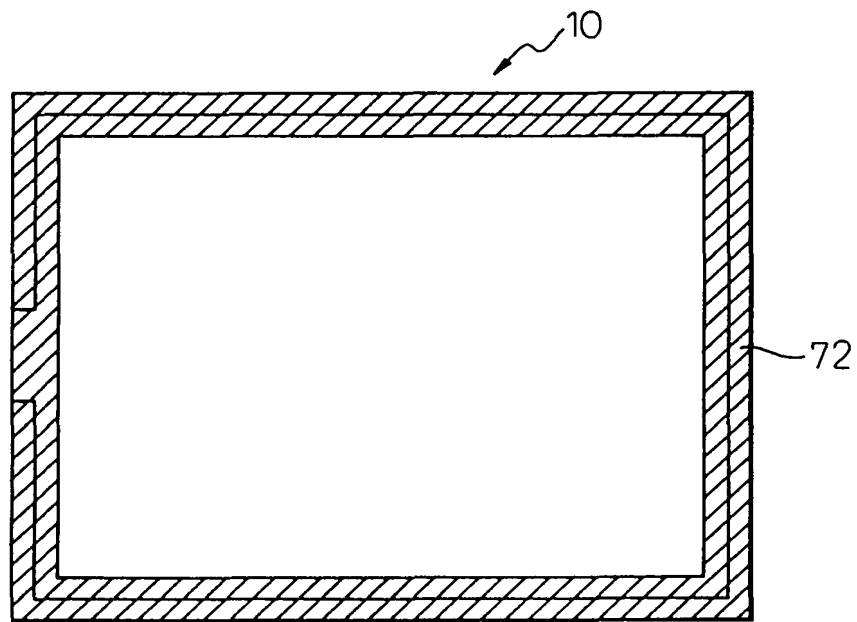


Fig.86



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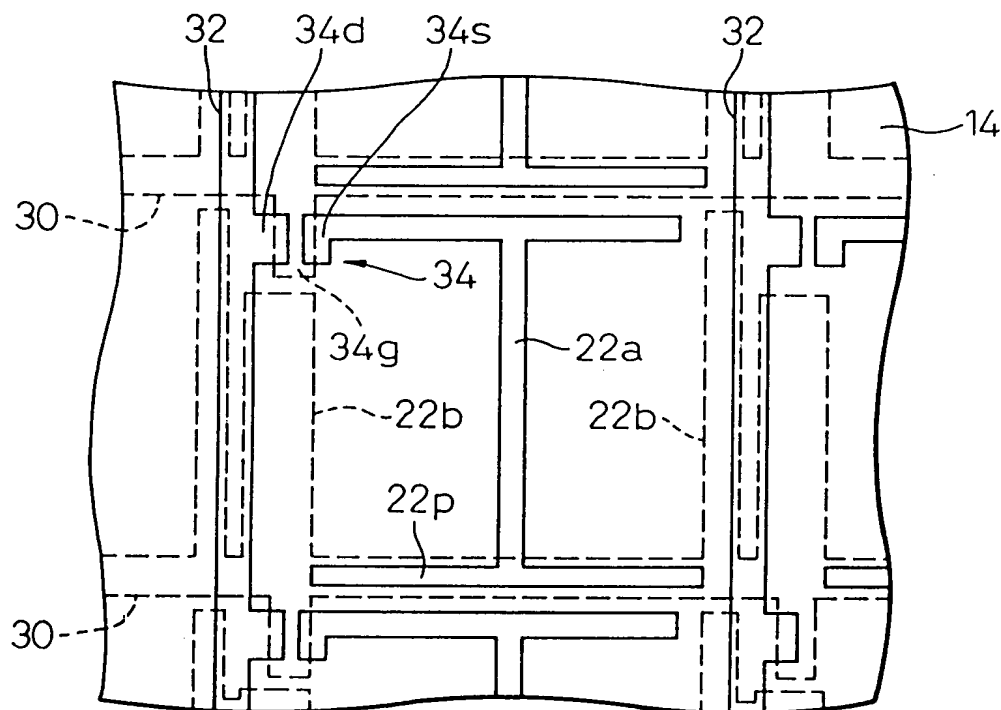
Fig.87



A cross-sectional view of a semiconductor device 10. The device includes a substrate 12 with a top layer 20. A central region 16 contains a complex structure 34. This structure includes a central core 32, surrounded by layers 34a, 34b, 34c, 34d, and 34s. A layer 24 is positioned above the central core 32. The entire structure is flanked by regions 22b and 24. The bottom of the device is defined by layers 50b and 50a, and a base layer 14. An arrow points to the central core 32.

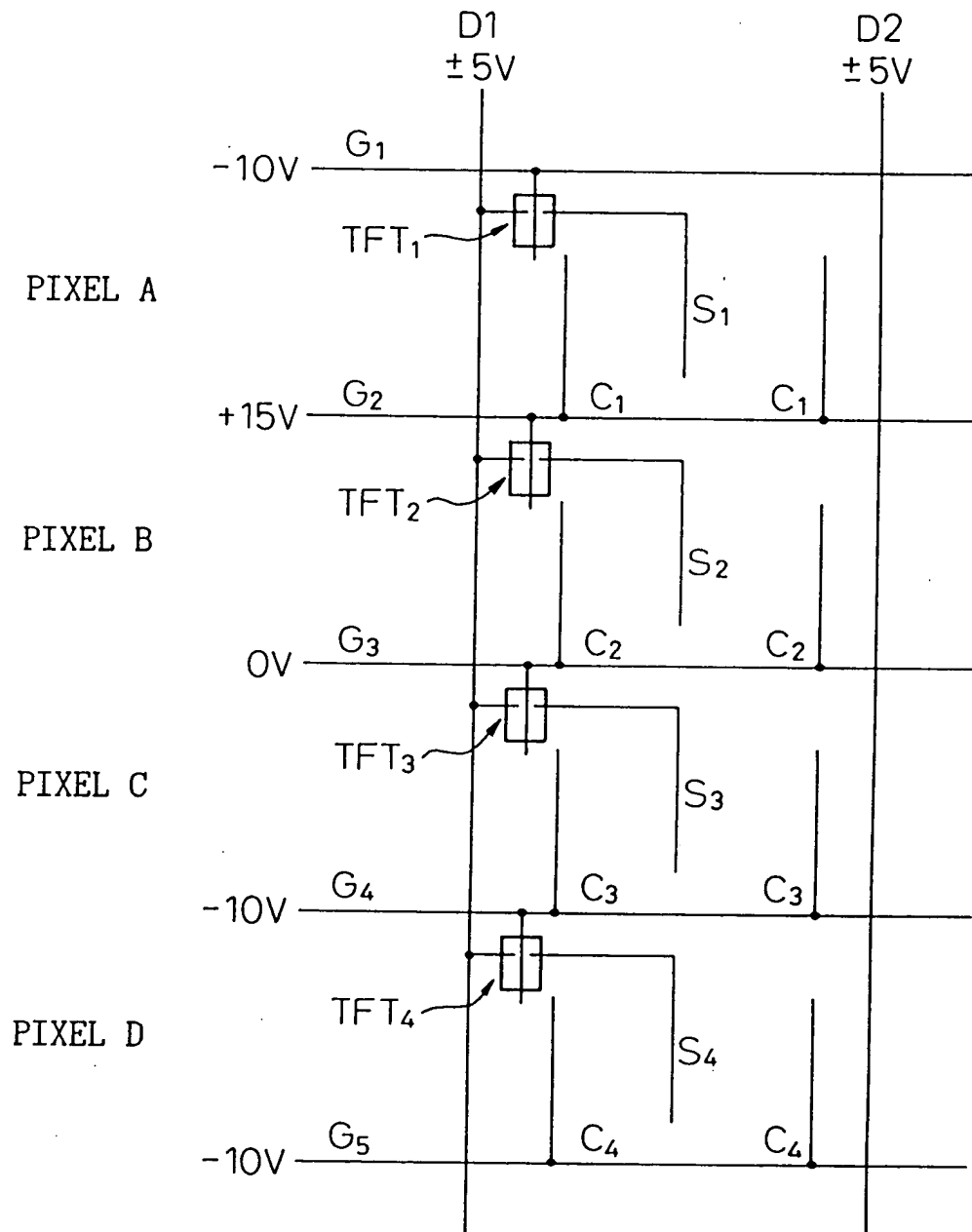
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106

Fig.90



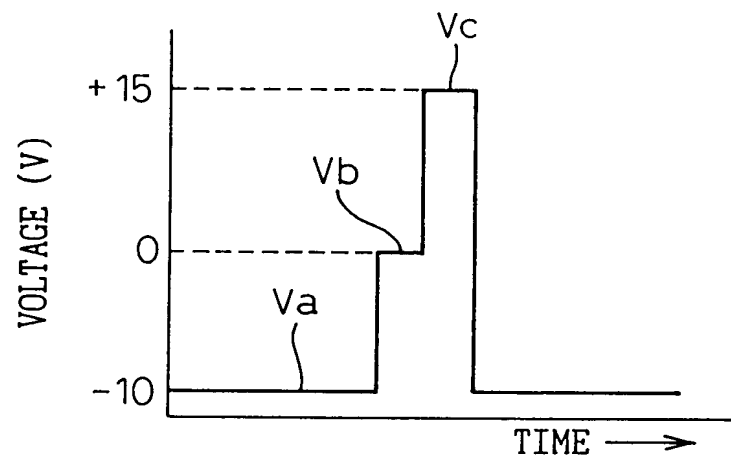
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Fig.91A



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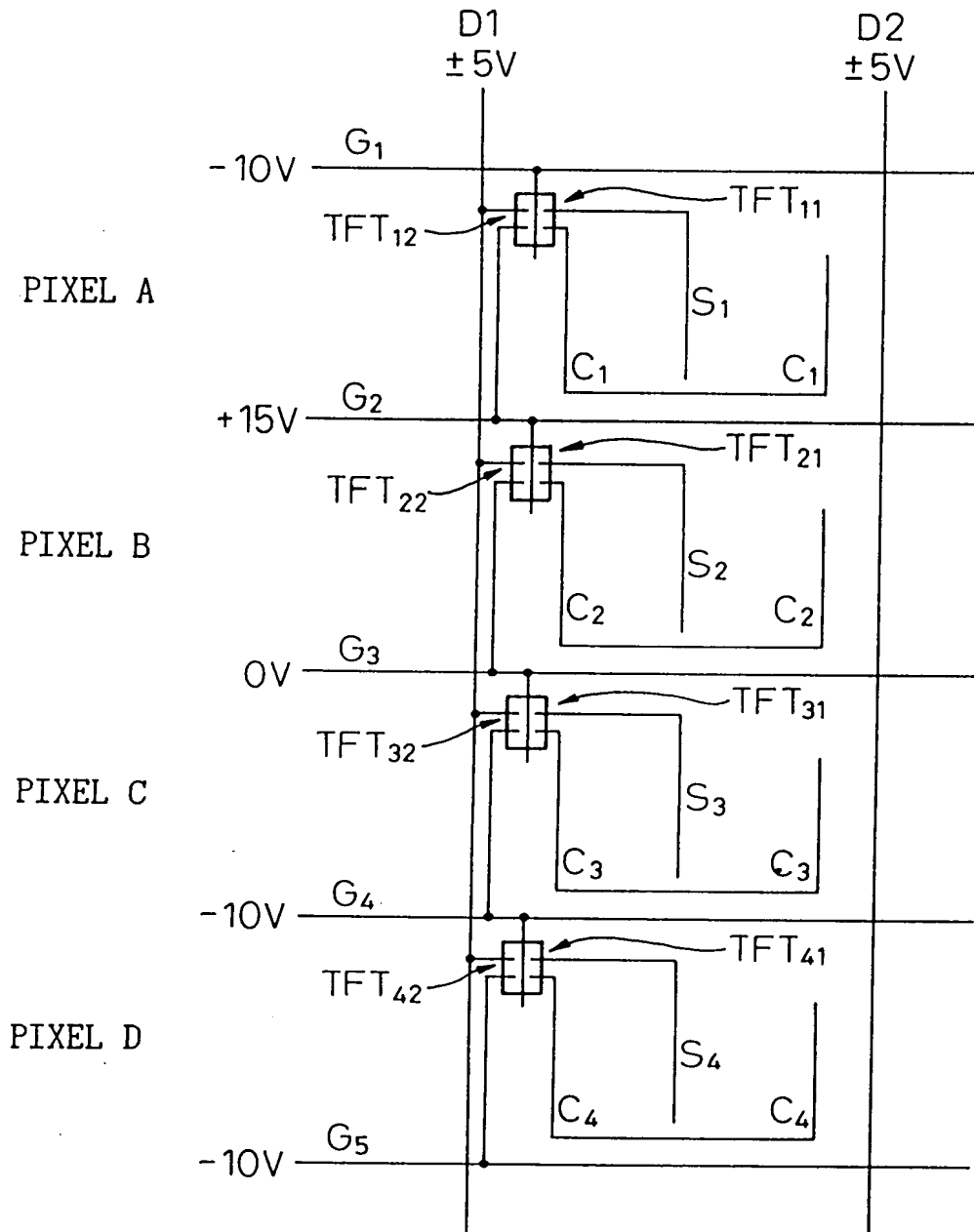
Fig.91B



[illegible]

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Fig.94



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Fig.95

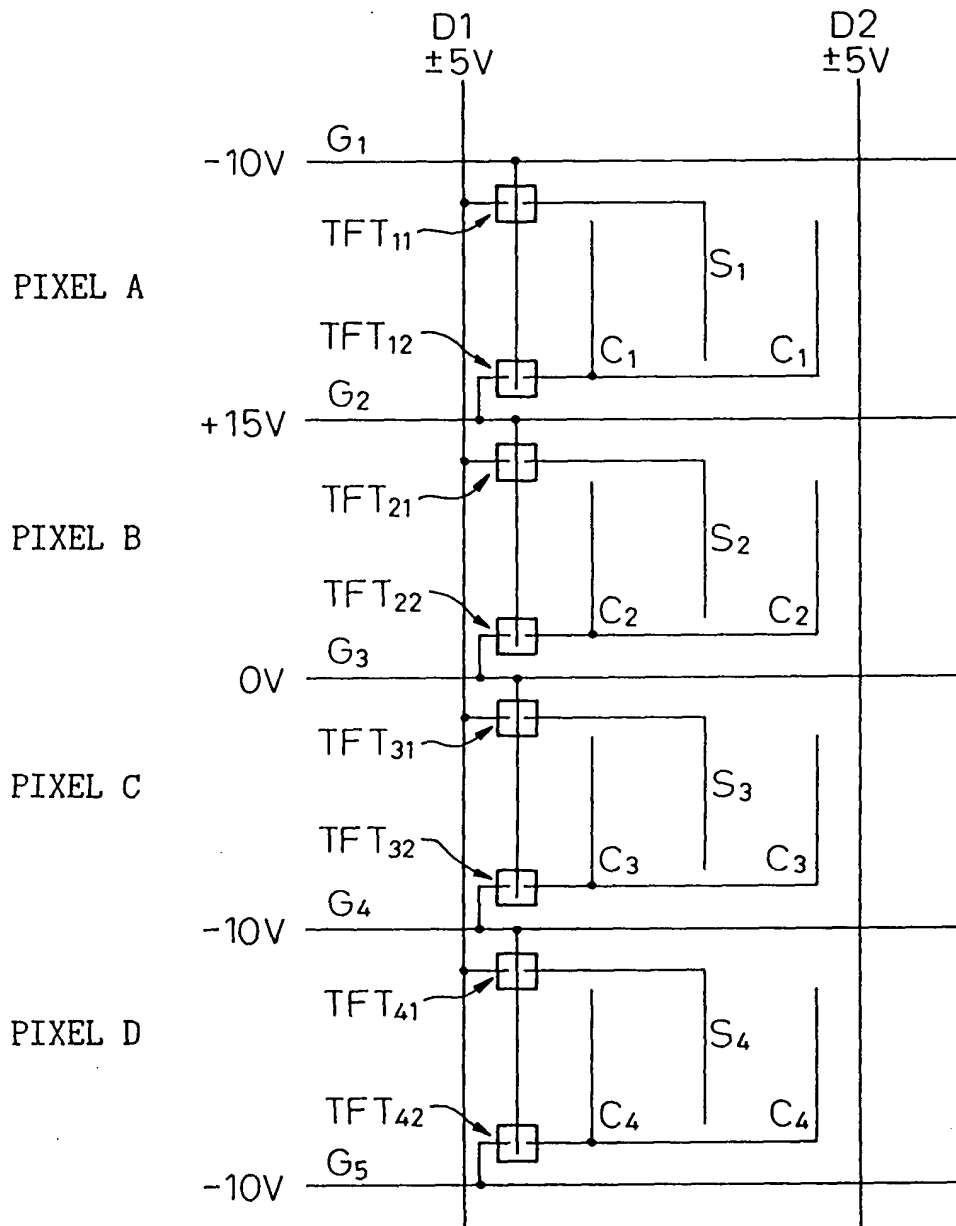
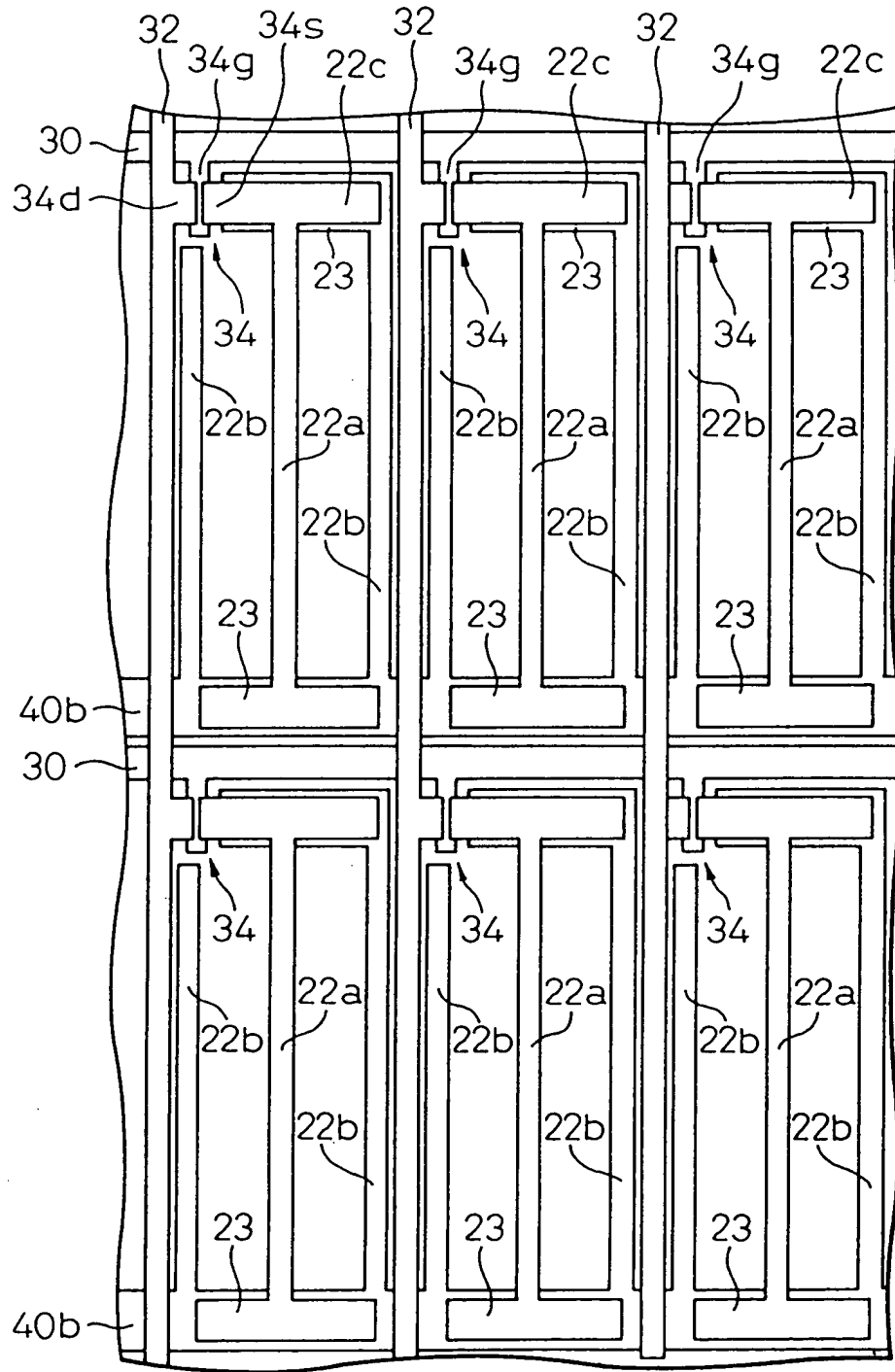


FIG. 1 is a cross-sectional view of a semiconductor device. The device is shown in a perspective view, revealing a substrate with a grid of vertical and horizontal layers. The layers are labeled with various identifiers: W_1 , 82B, 80, 82R, 80, 82G, 80, 80, 98, W_2 , W_3 , and W_4 . The diagram illustrates the internal structure of the device, including the arrangement of the layers and the regions defined by the labels. The hatching indicates different materials or structures used in the device.

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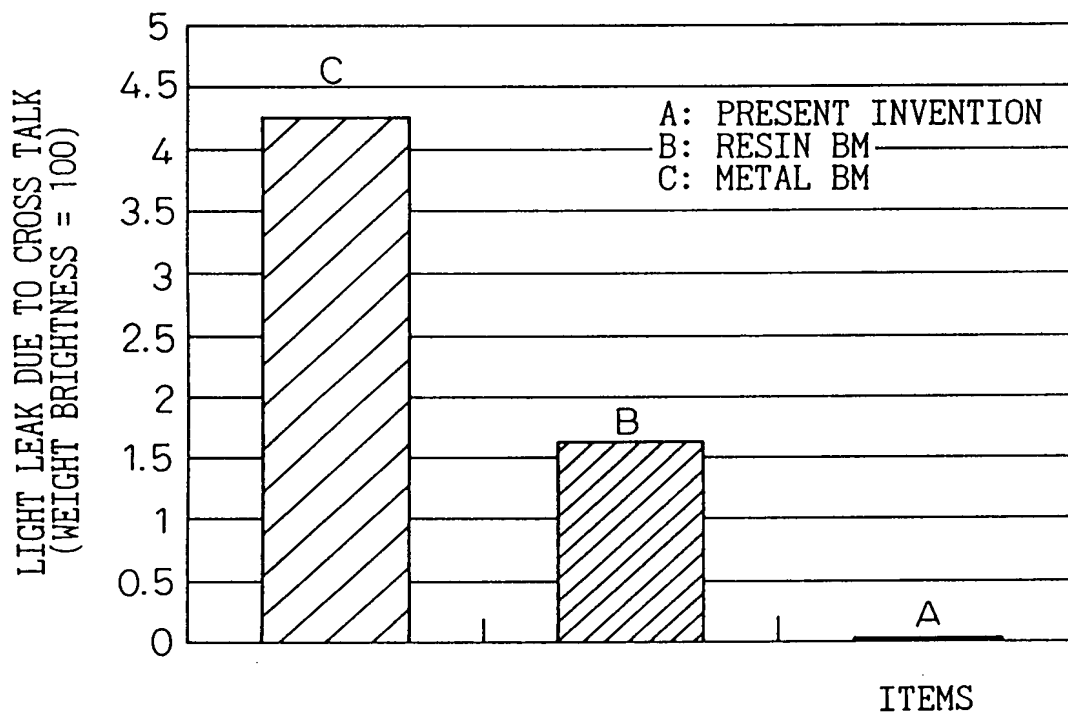
Fig.97



[illegible]

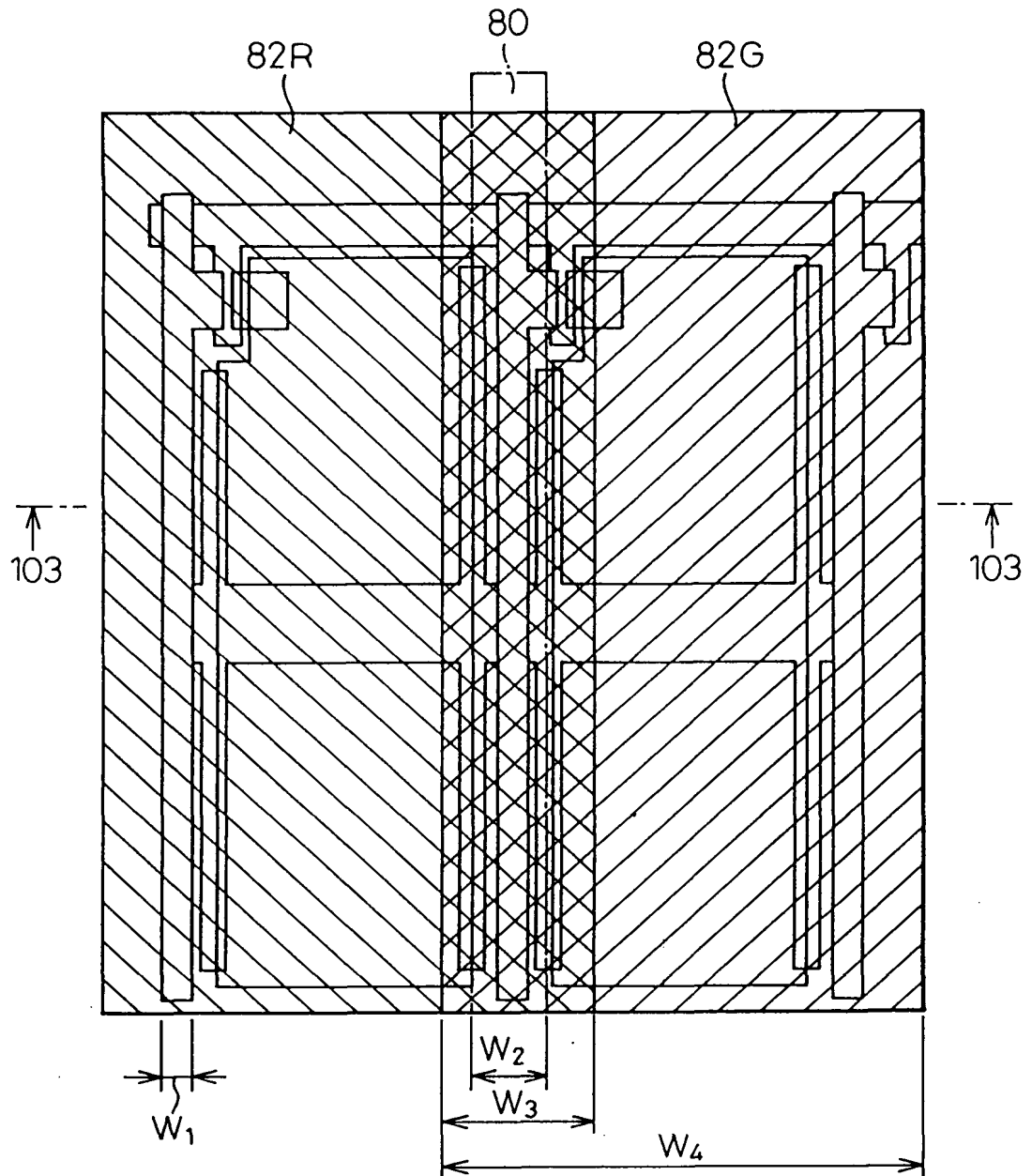
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Fig.100



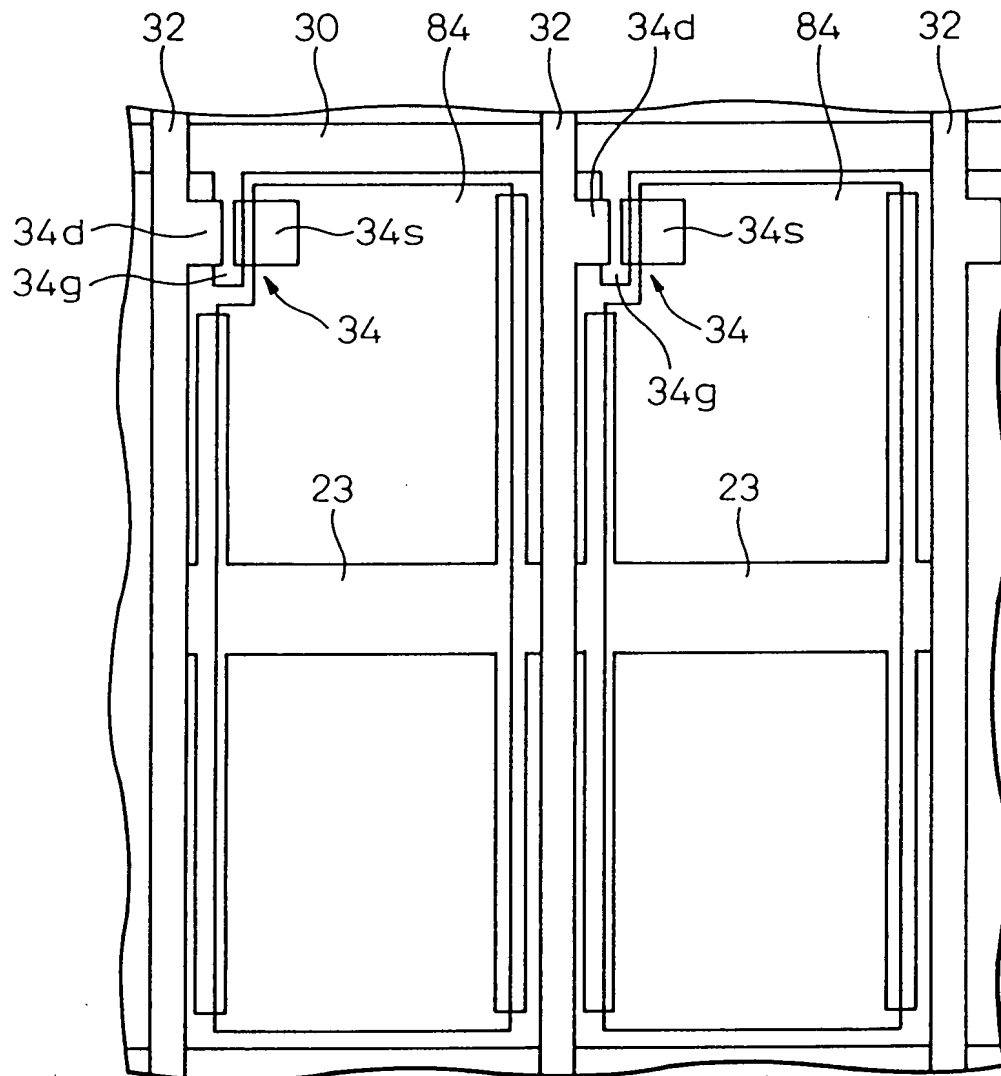
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Fig.101



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Fig.102



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Fig.105

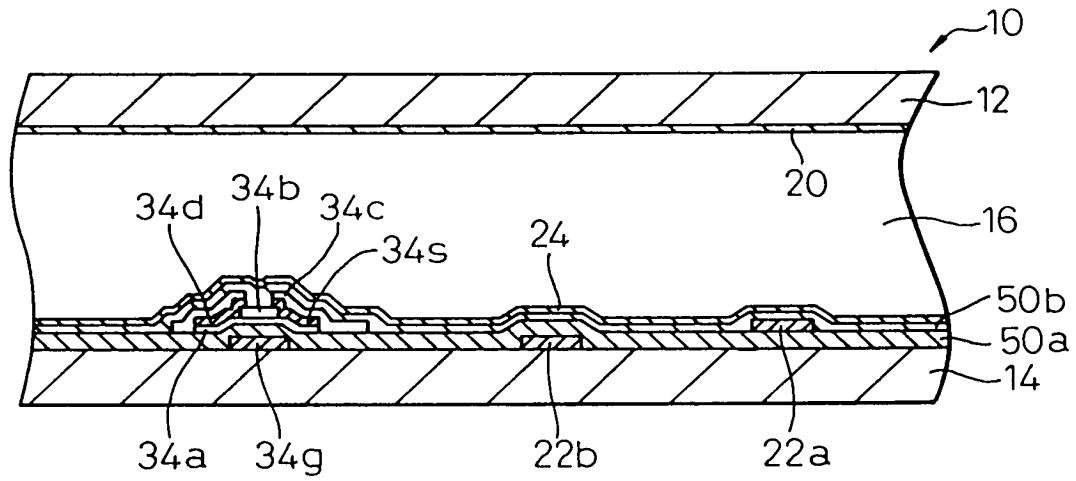
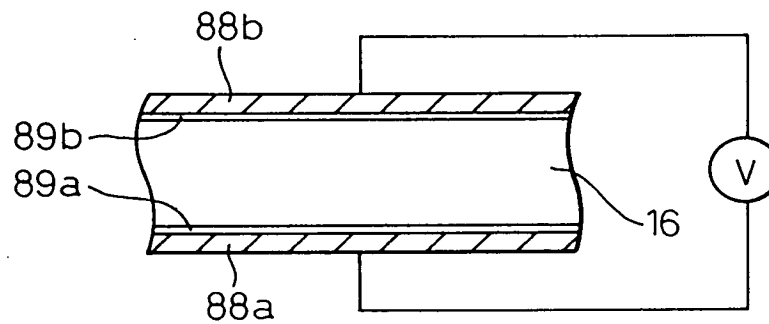


Fig.106



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Fig.107

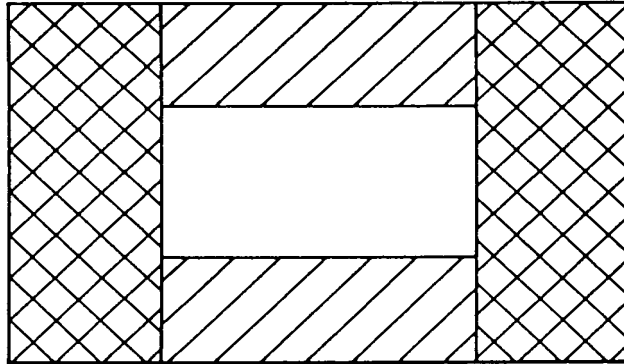
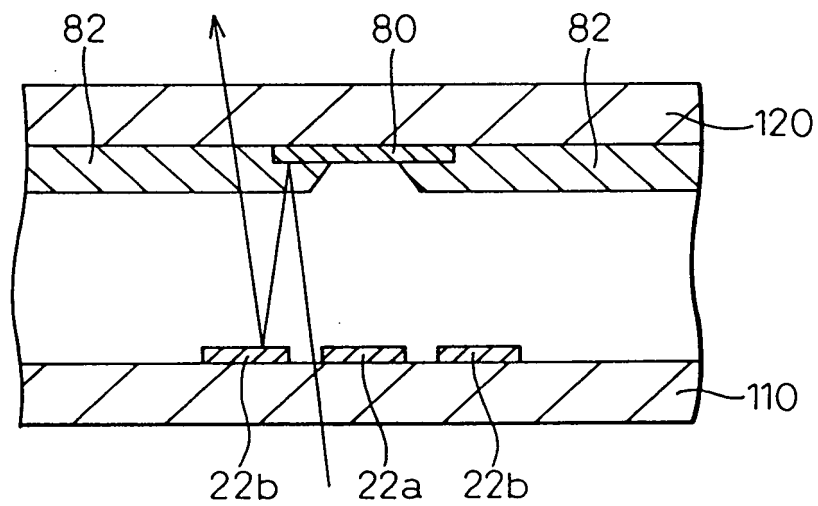
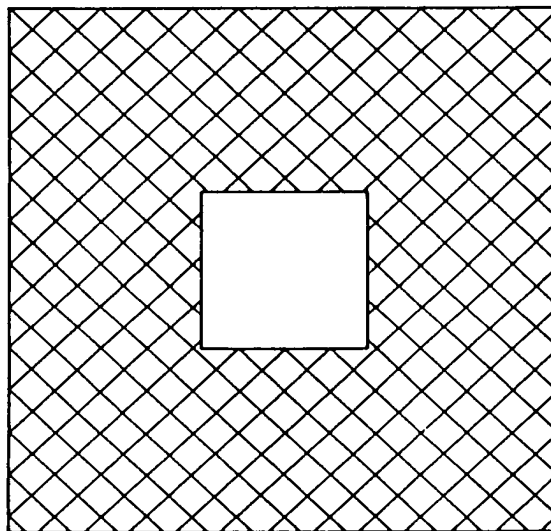


Fig.108



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Fig.109



[illegible]

A cross-sectional view of a multi-layered structure 10. The structure consists of several layers. The top layer is labeled 90. Below it is a layer labeled 26. The middle section is a large white rectangular area labeled 16. Below the white area is a layer labeled 50. The bottom layer is labeled 14. There are two small rectangular features, 22a and 22b, embedded in the layer 50. A vertical line 24 is shown in the center of the structure. A horizontal line 28 is shown at the bottom of the structure. A curved arrow 10 points to the top right corner of the structure.

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Fig.112

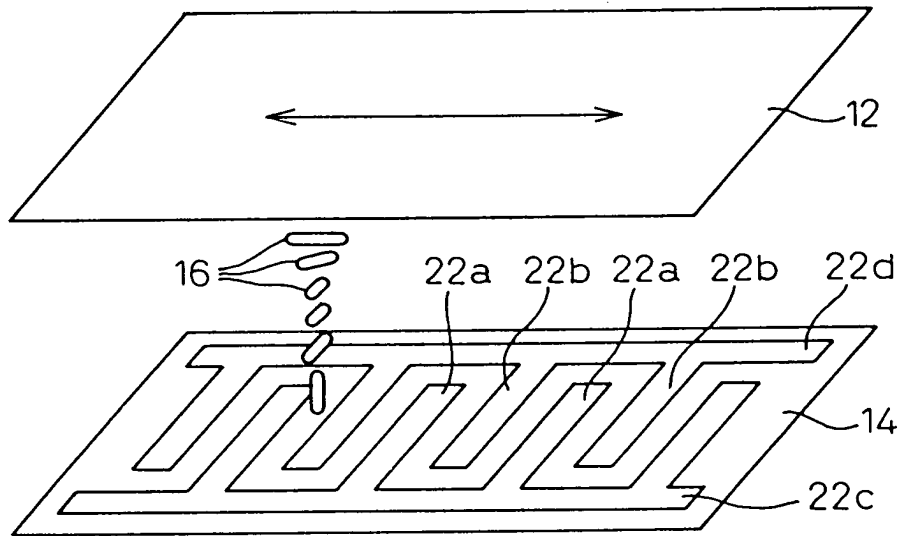
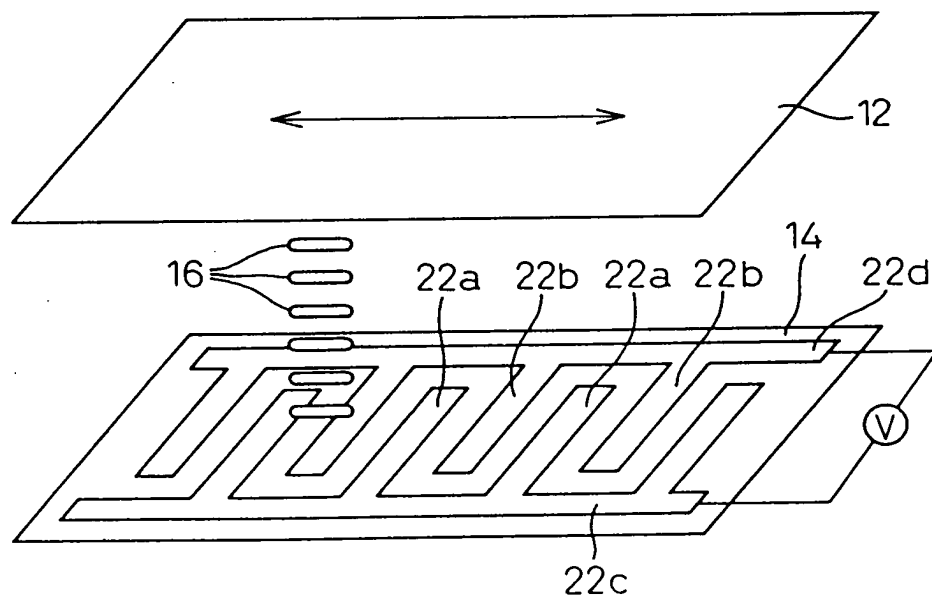
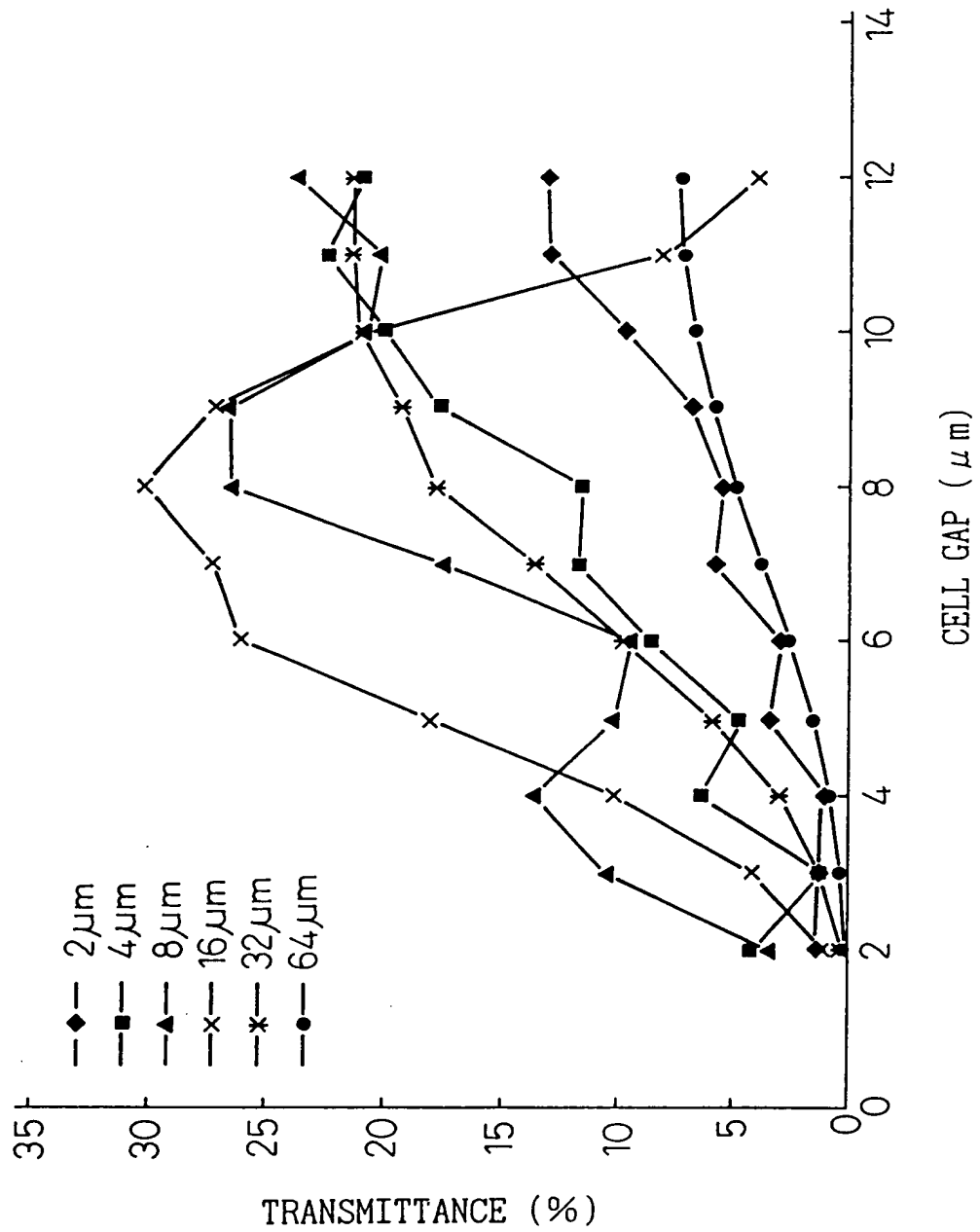


Fig.113



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Fig.114



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Fig.115A

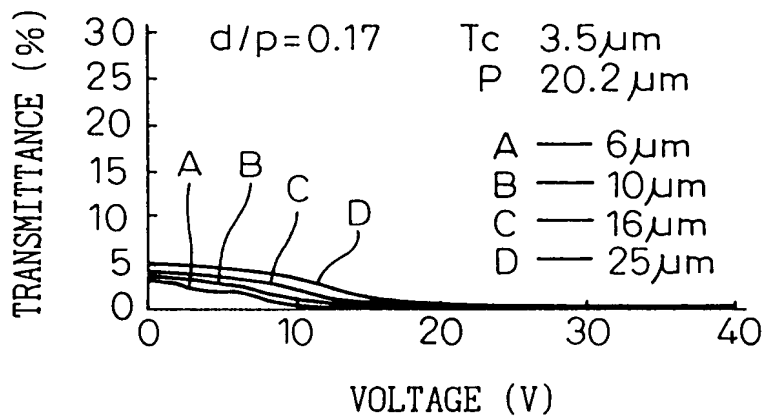


Fig.115B

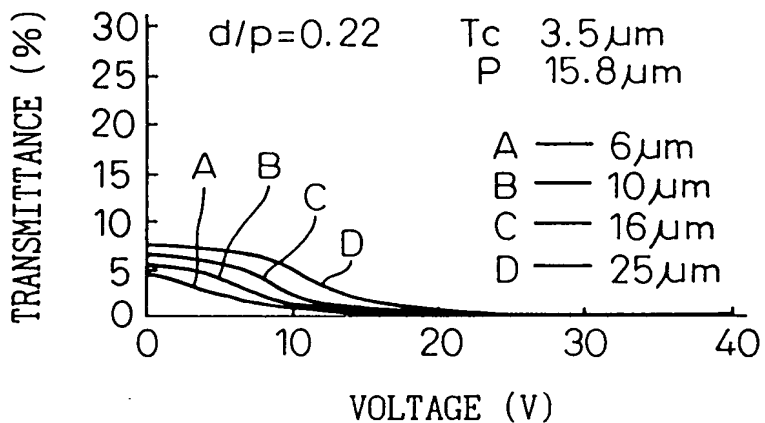
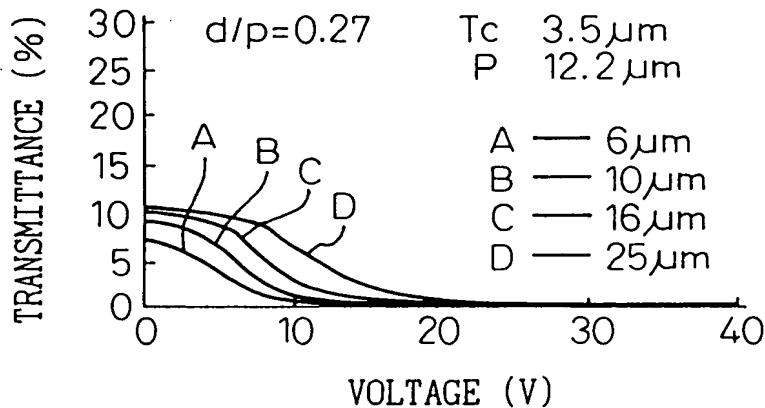


Fig.115C



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Fig.116A

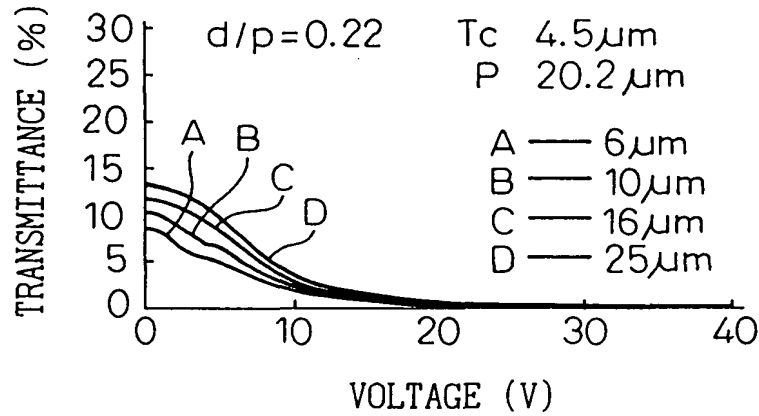


Fig.116B

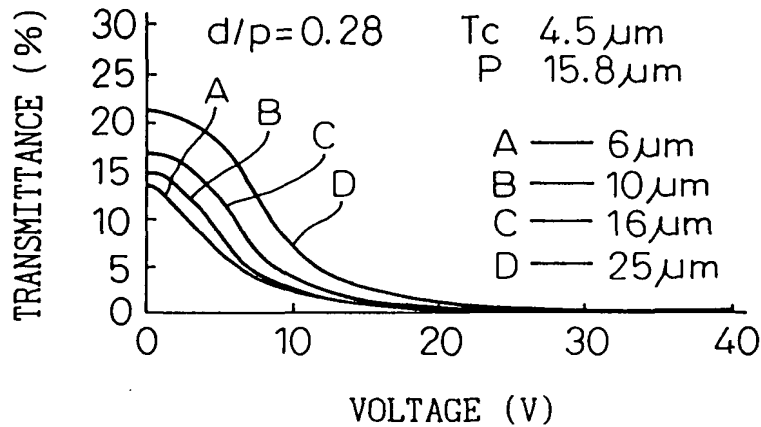
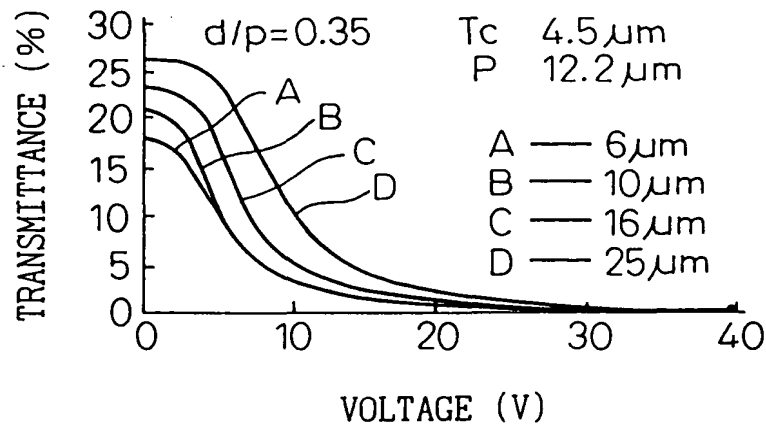


Fig.116C



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106

Fig.117A

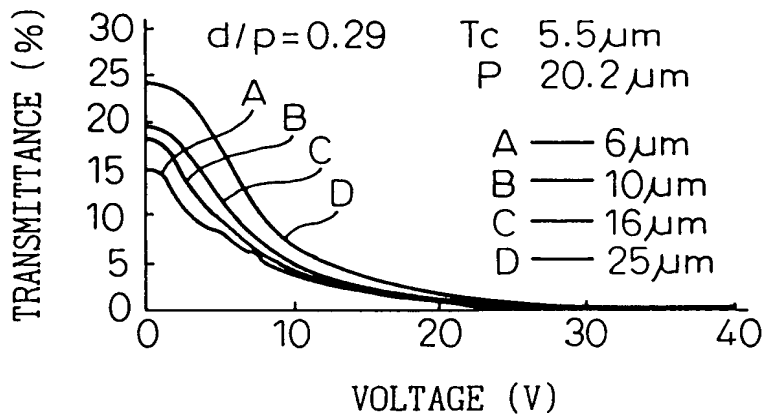


Fig.117B

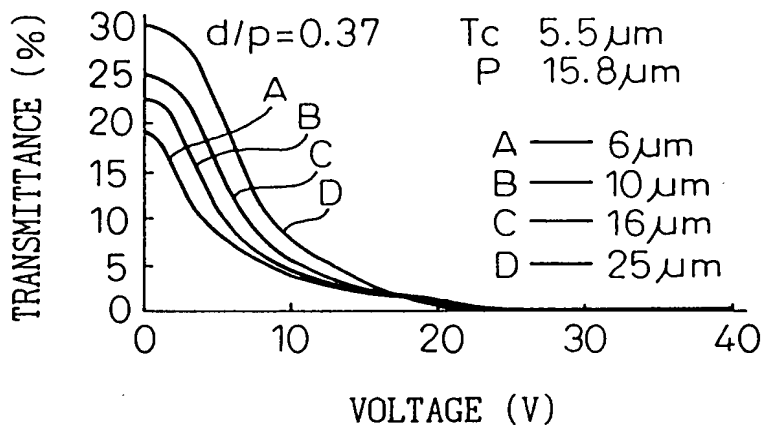
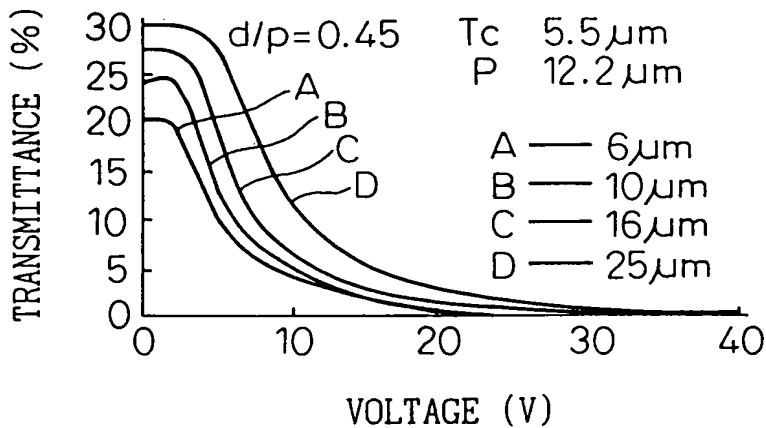
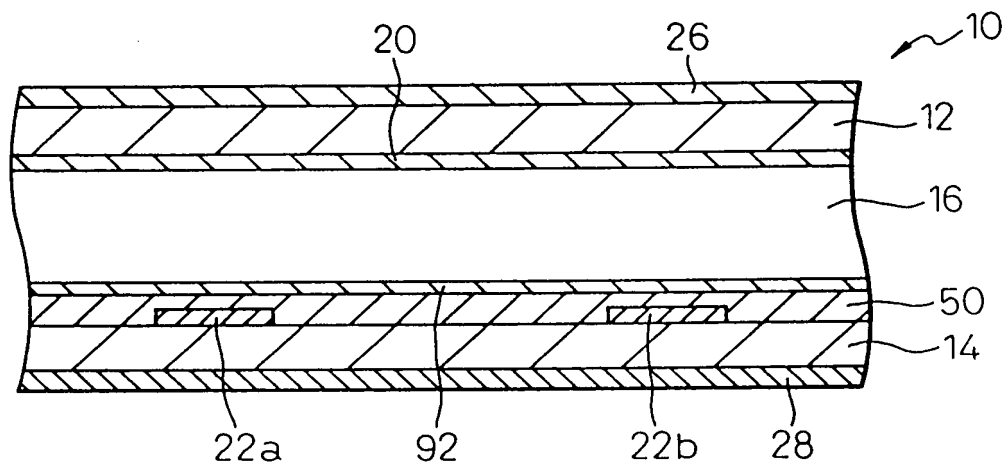


Fig.117C



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Fig.118



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Fig.119

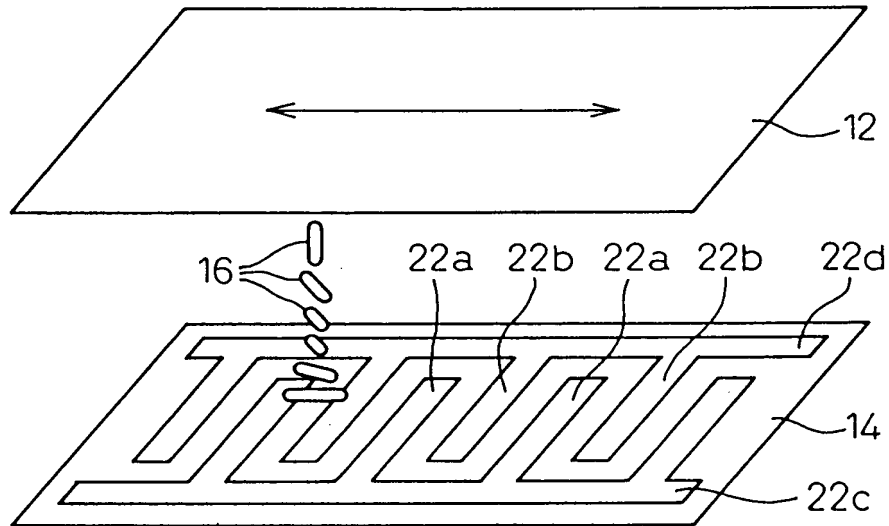
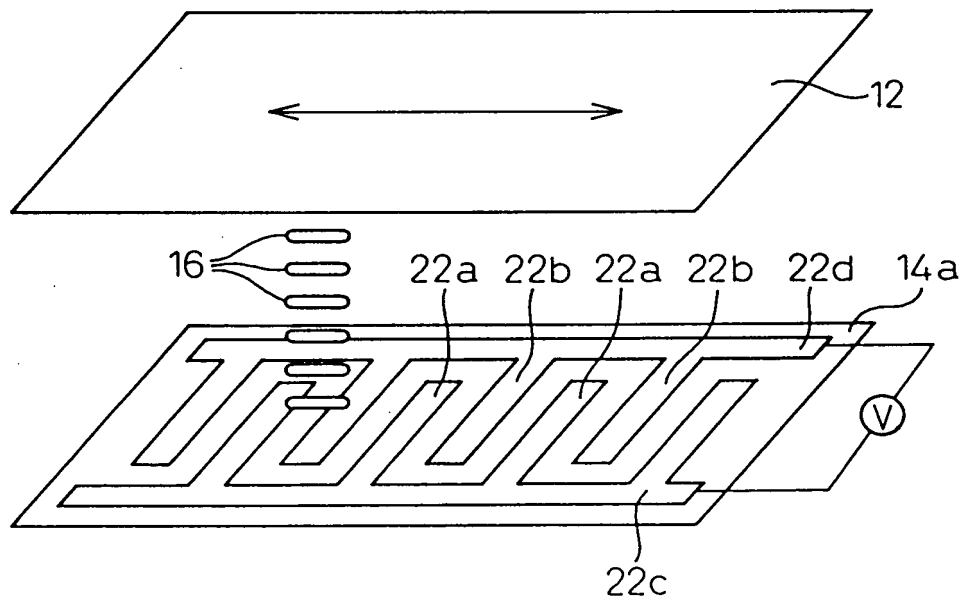


Fig.120



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Fig.121

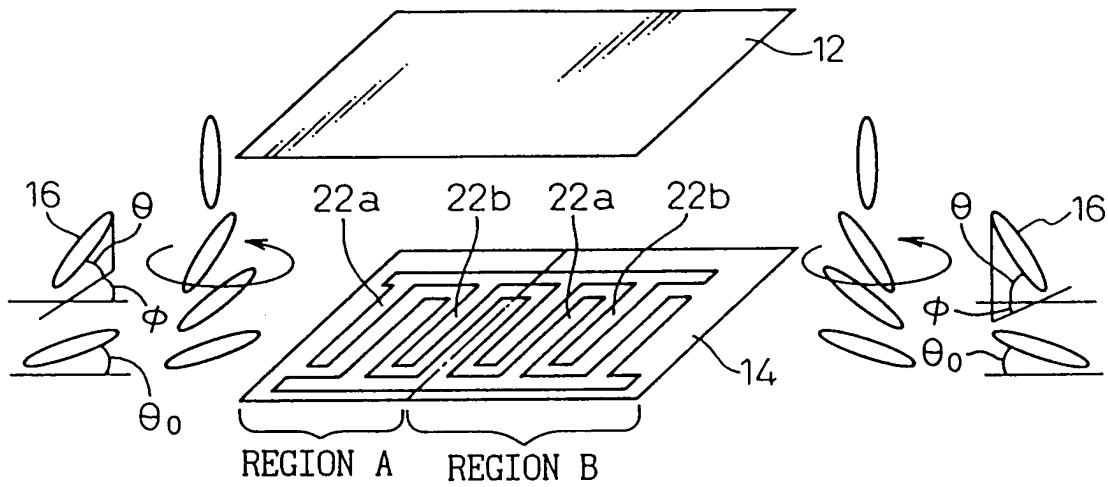
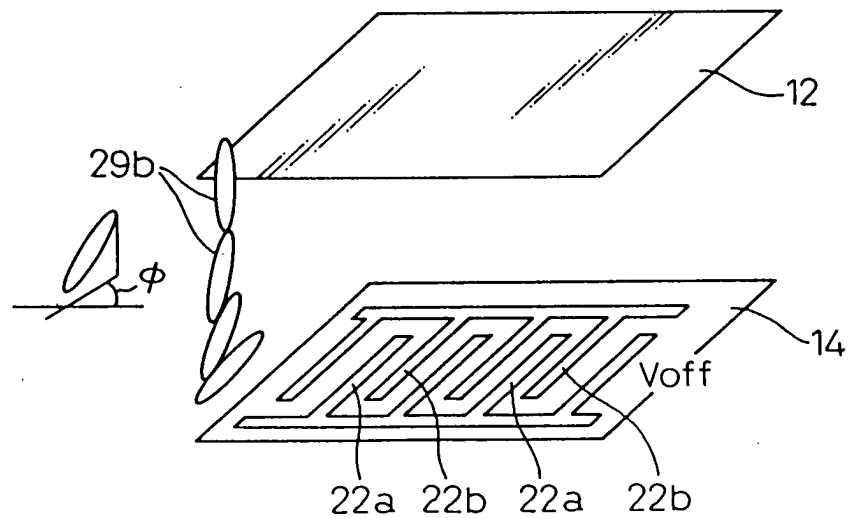


Fig.122



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Fig.123

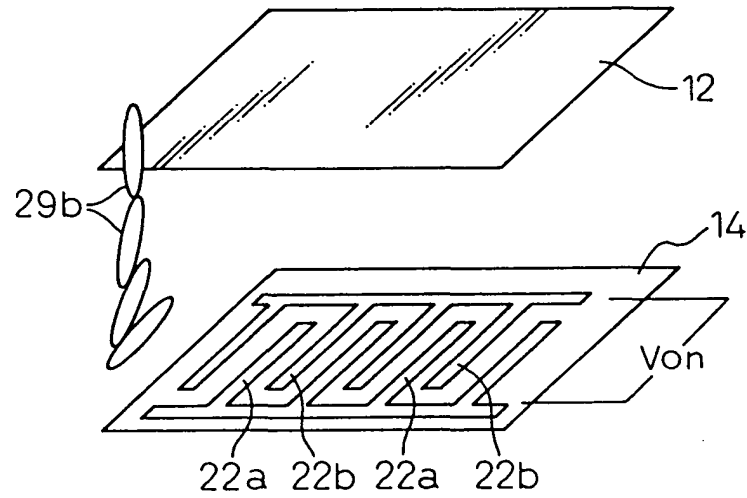
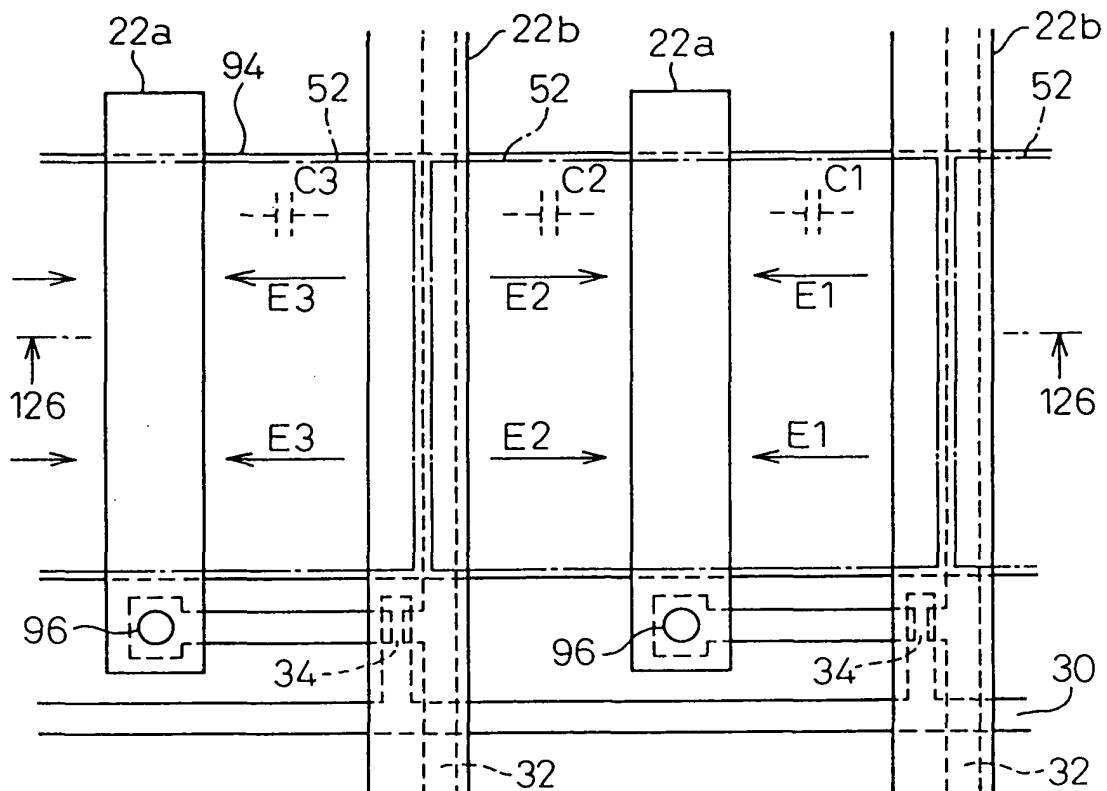


Fig.124



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Fig.125

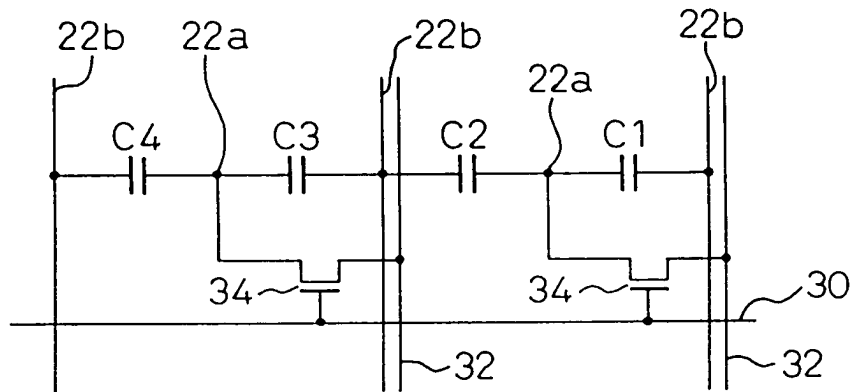
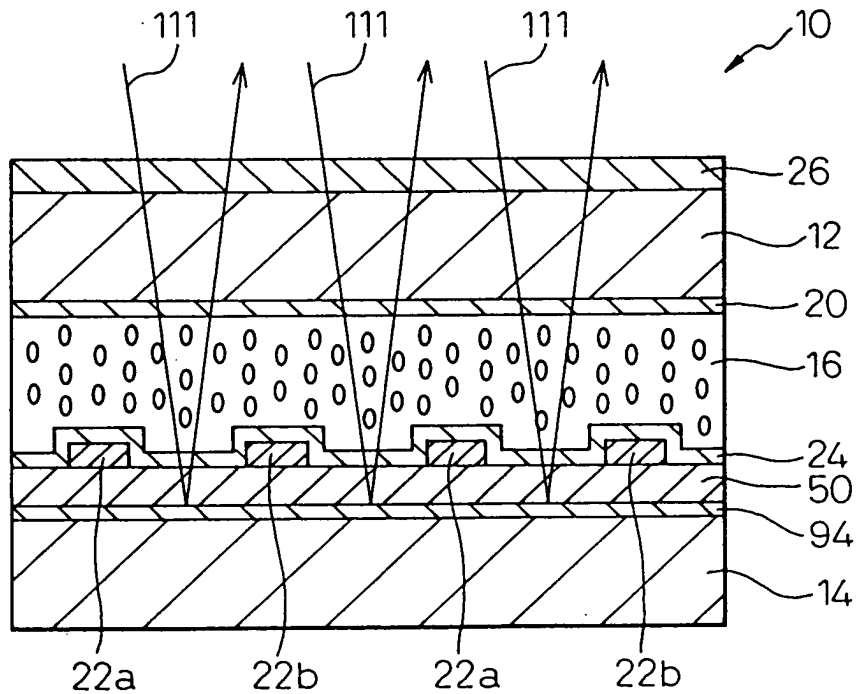
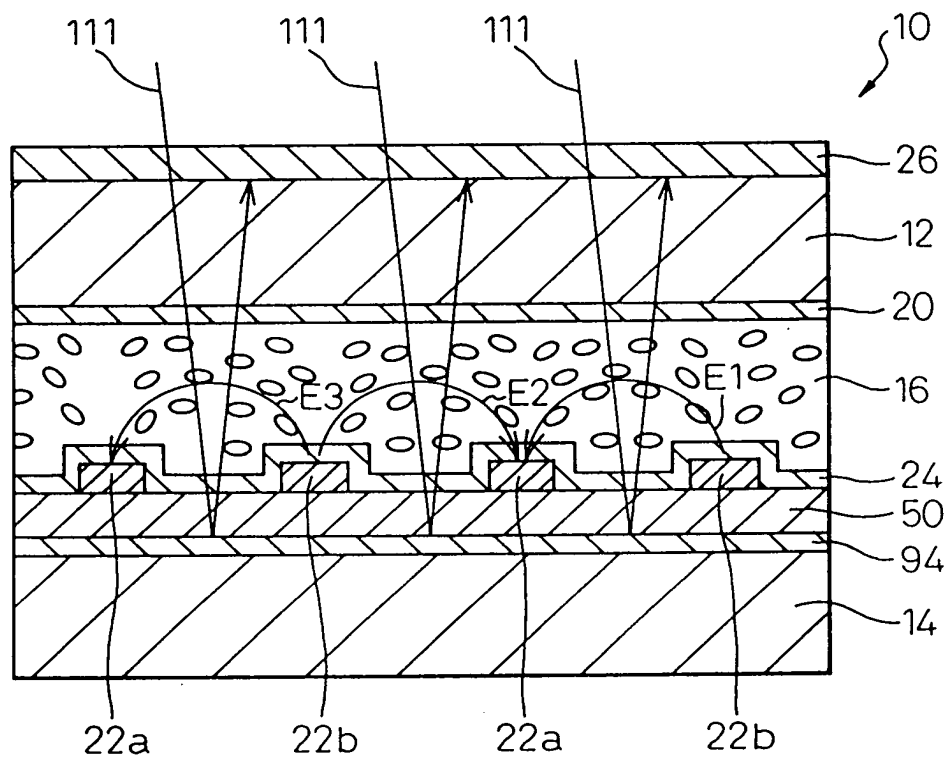


Fig.126



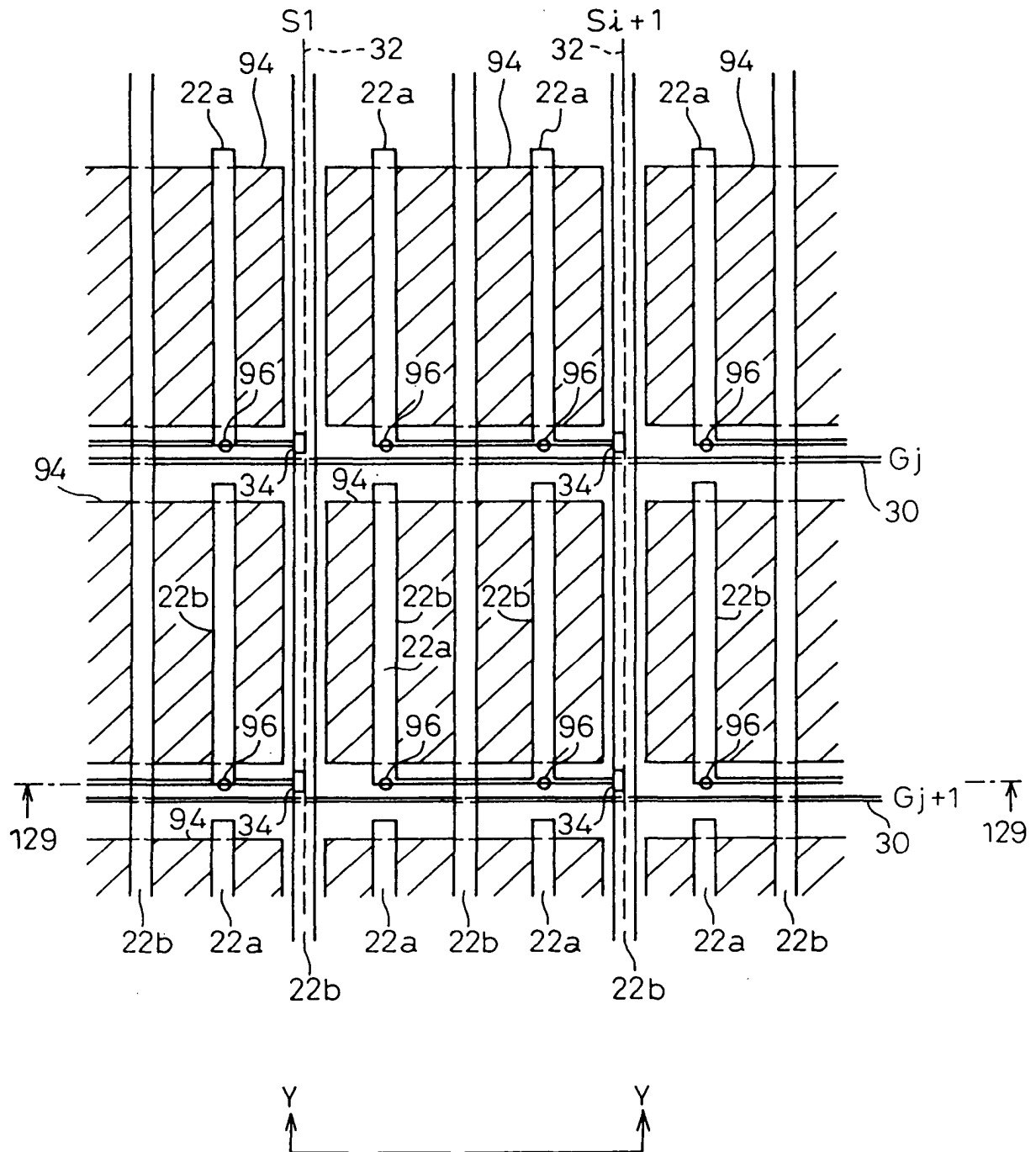
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Fig.127



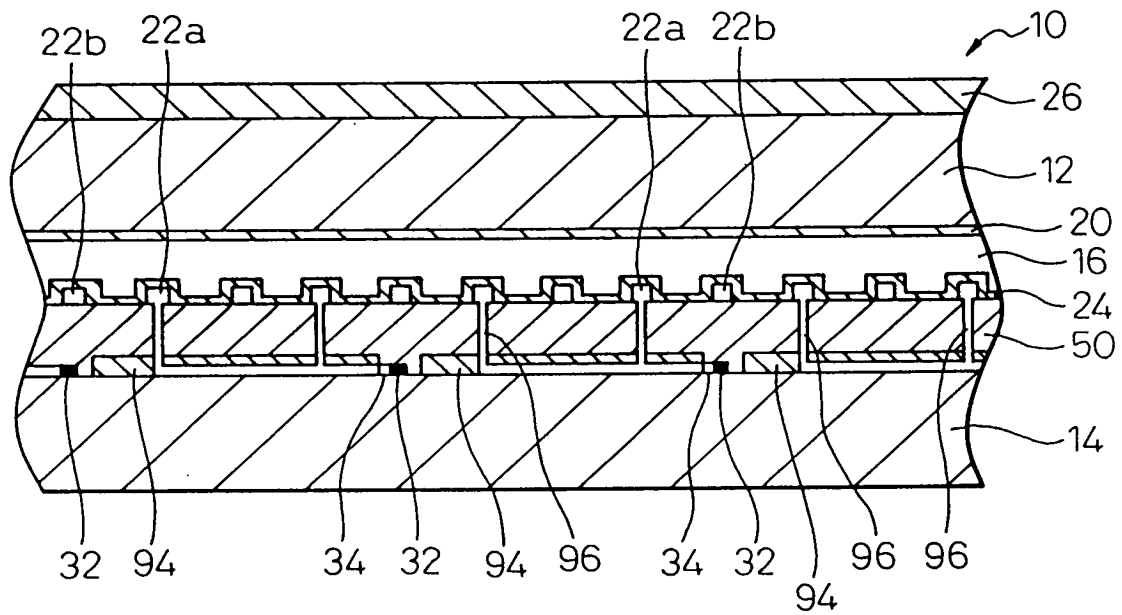
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Fig.128



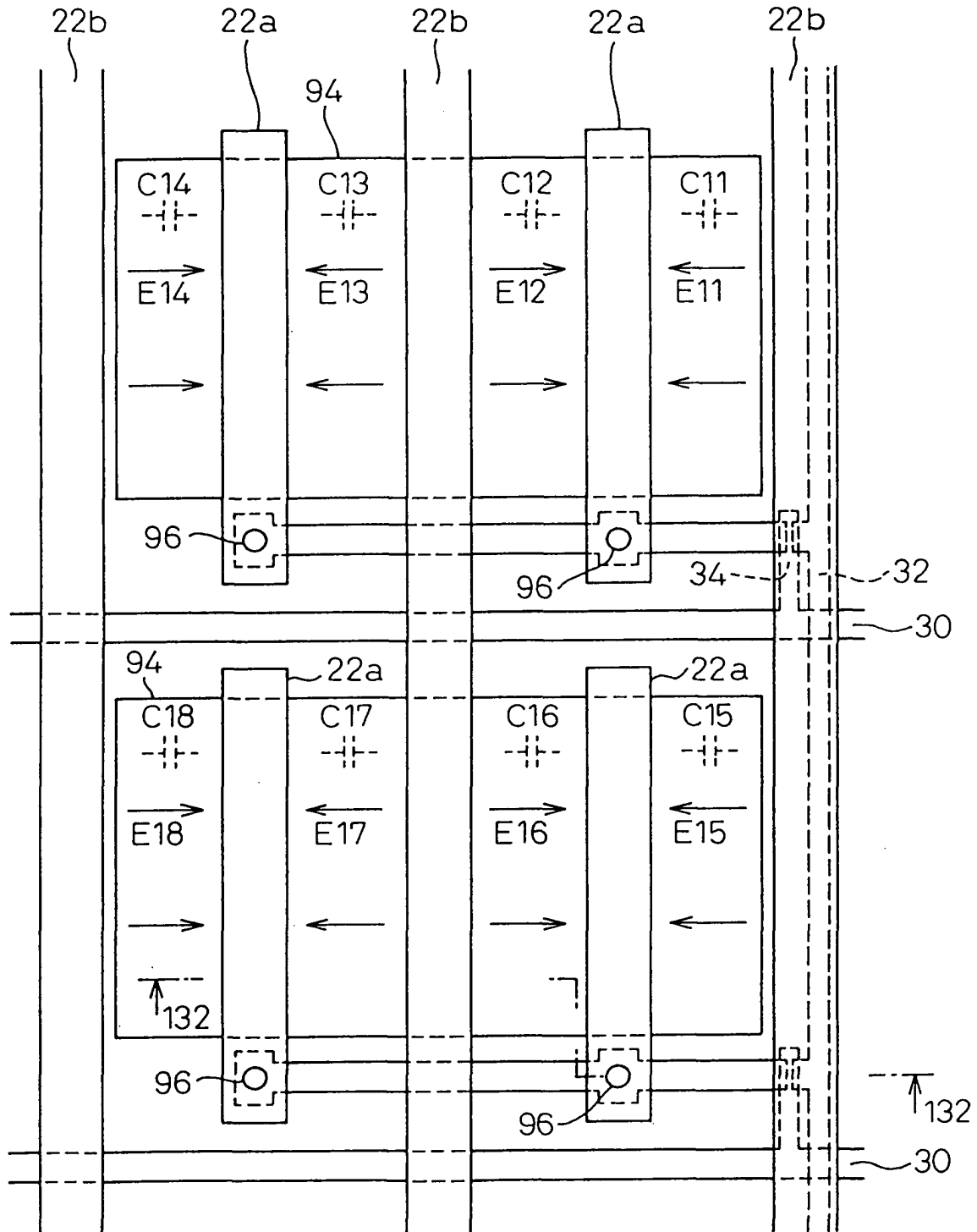
85/
106

Fig.129



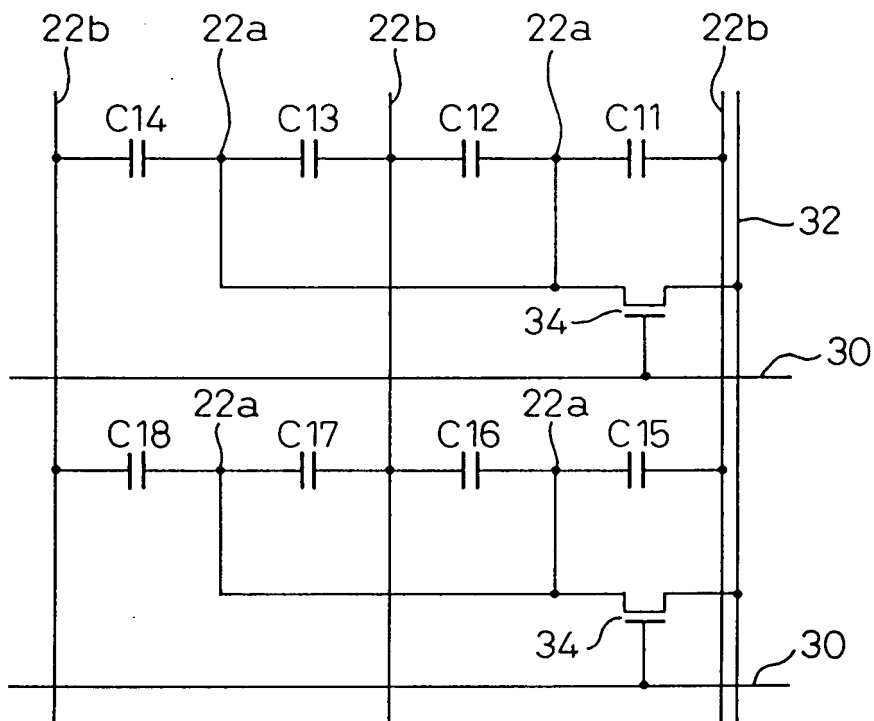
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Fig.130



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Fig.131



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Fig.132A

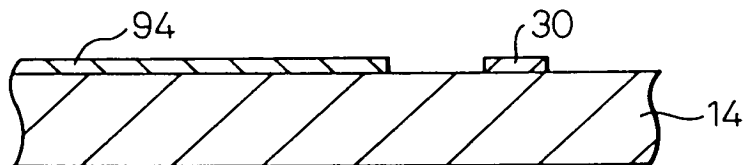


Fig.132B

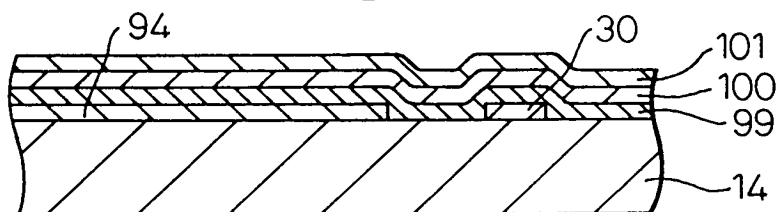


Fig.132C

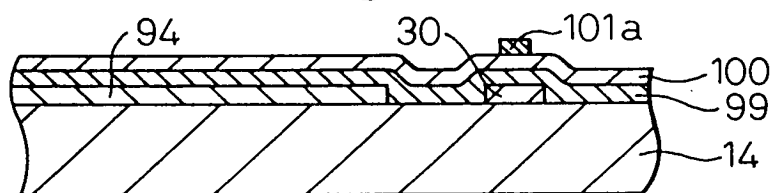


Fig.132D

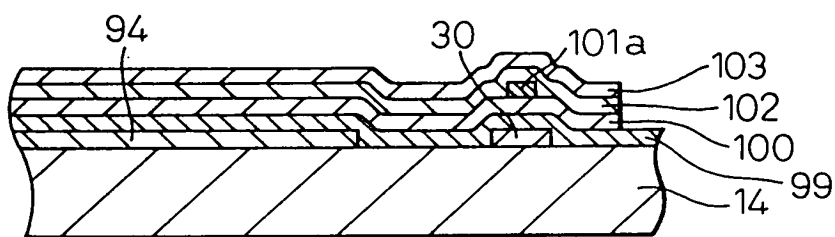
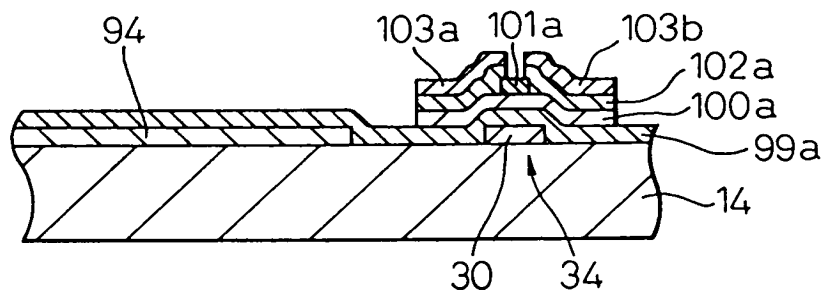


Fig.132E



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Fig.133A

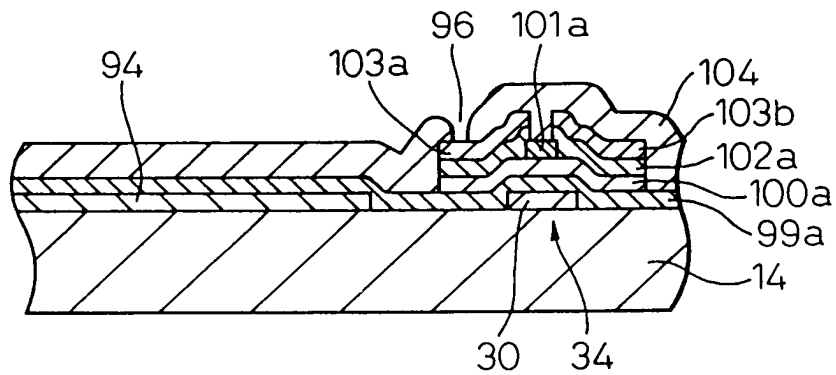


Fig.133B

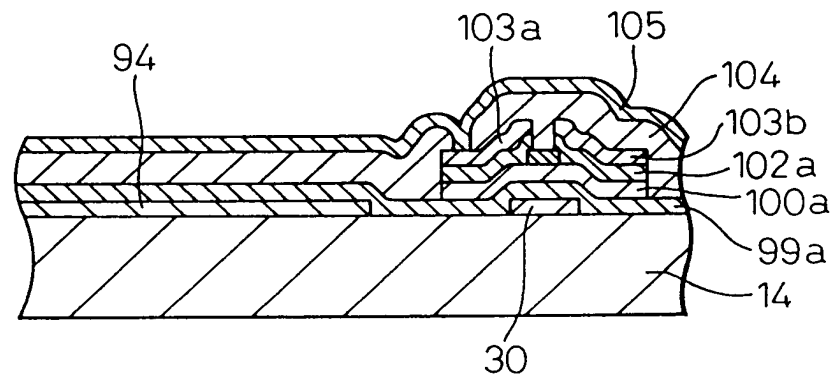
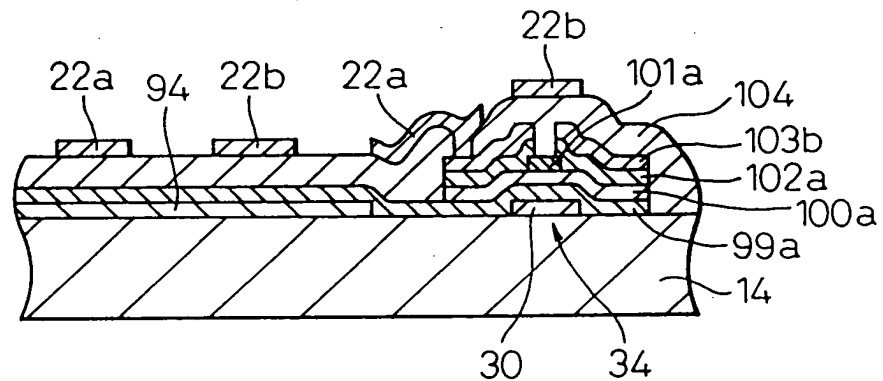


Fig.133C



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Fig.134A

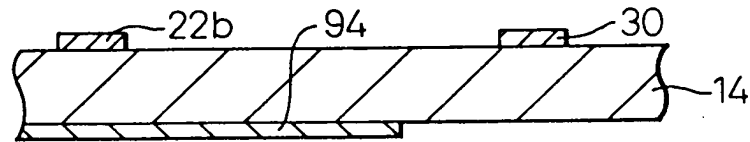


Fig.134B

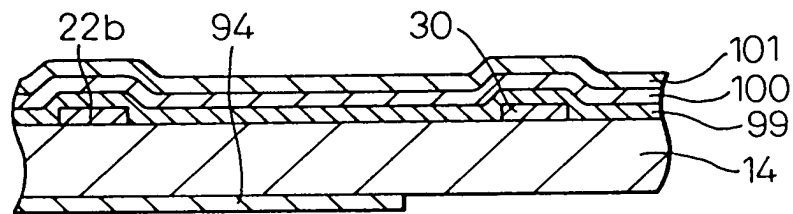


Fig.134C

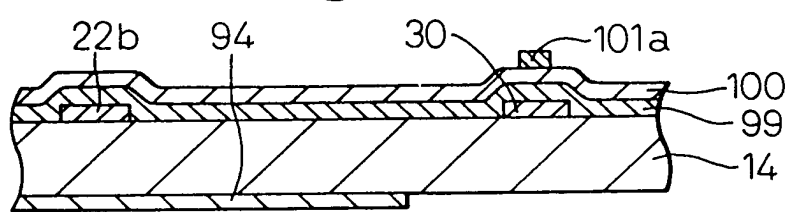


Fig.134D

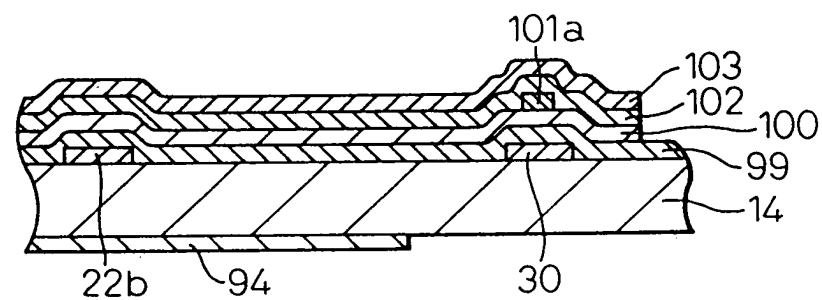
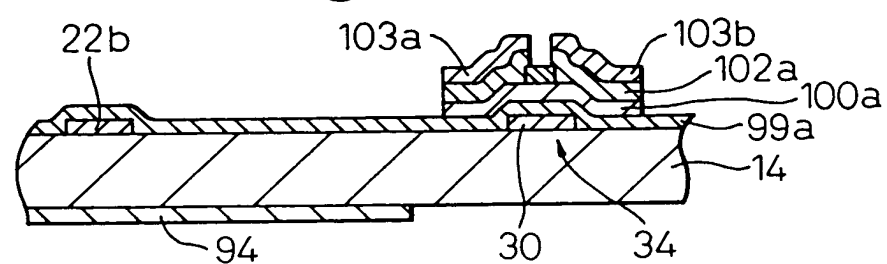
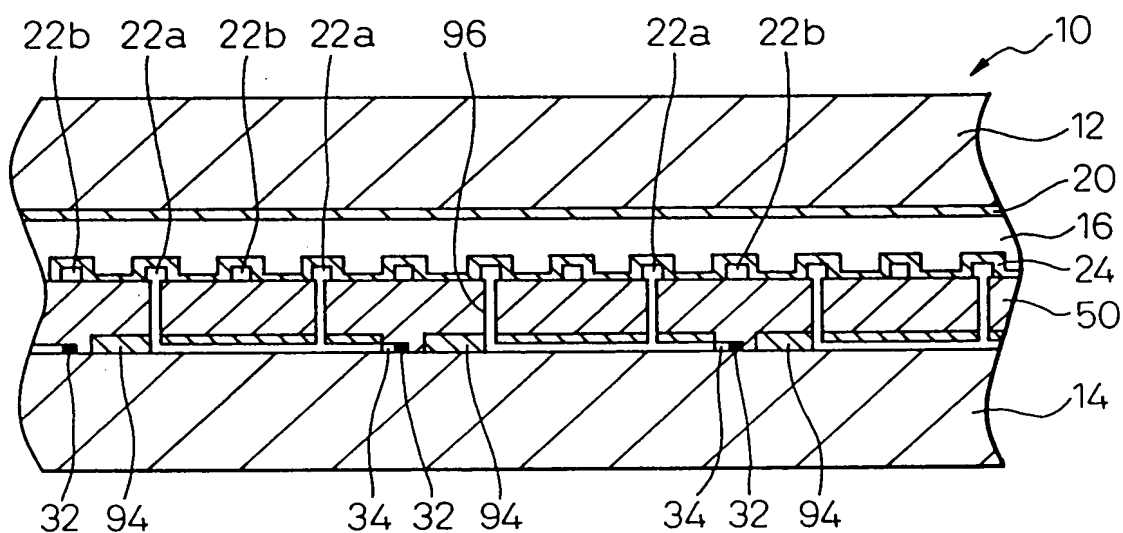
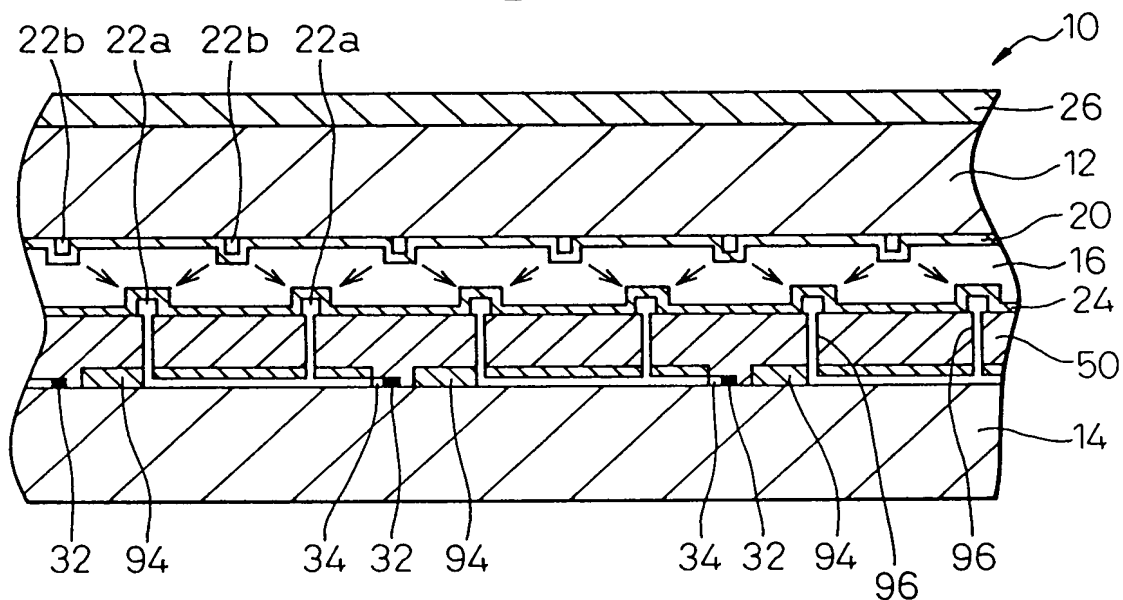


Fig.134E





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Fig.137

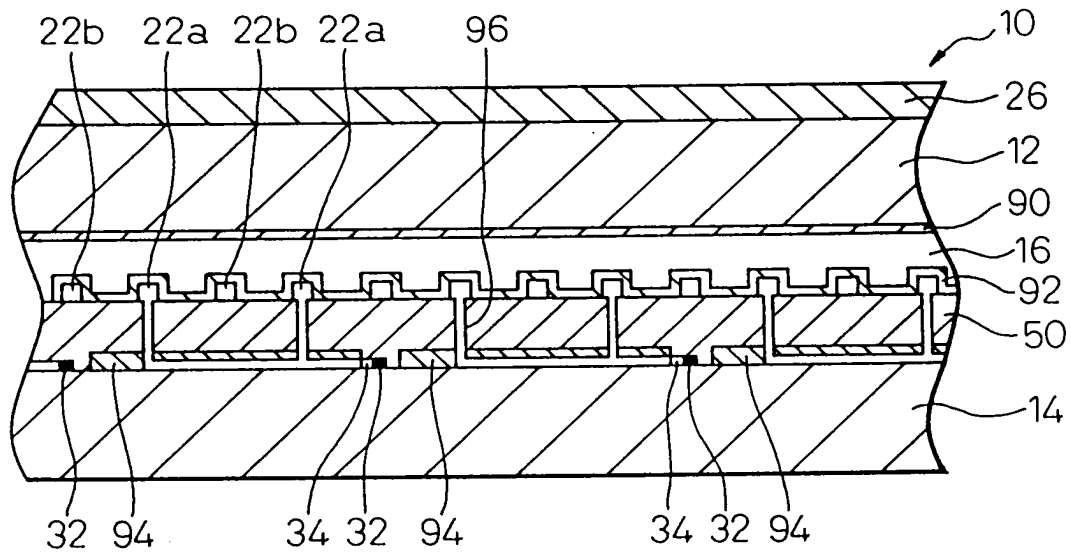
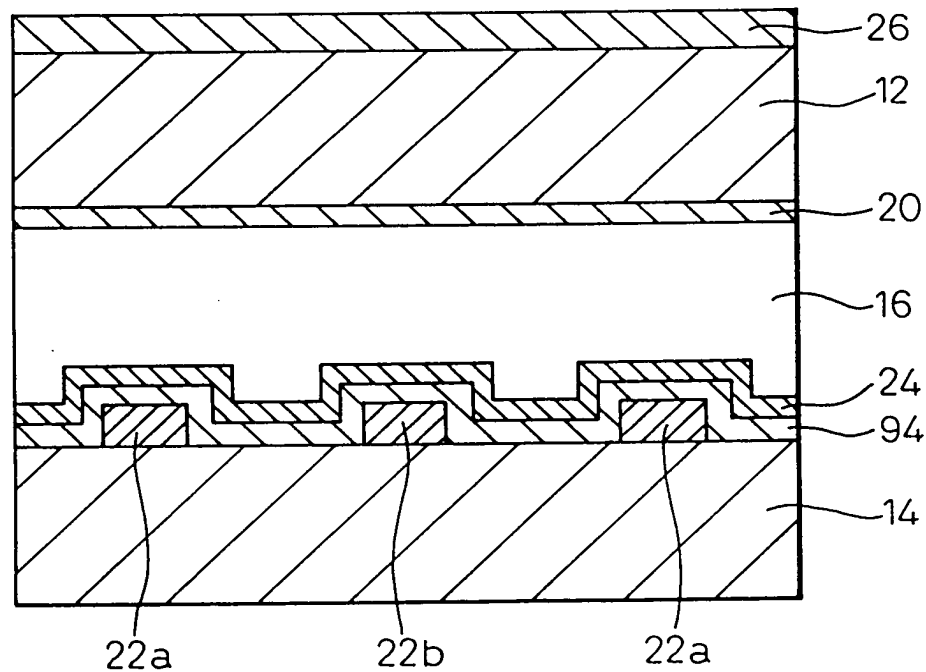


Fig.138



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Fig.139

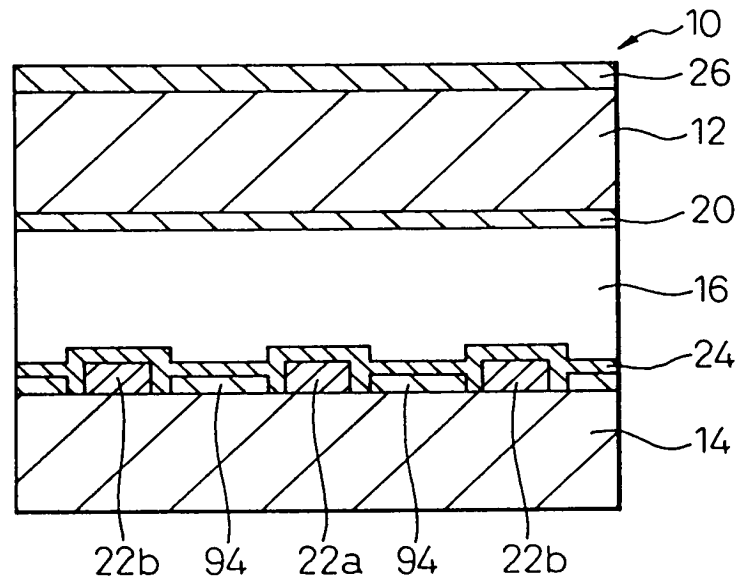
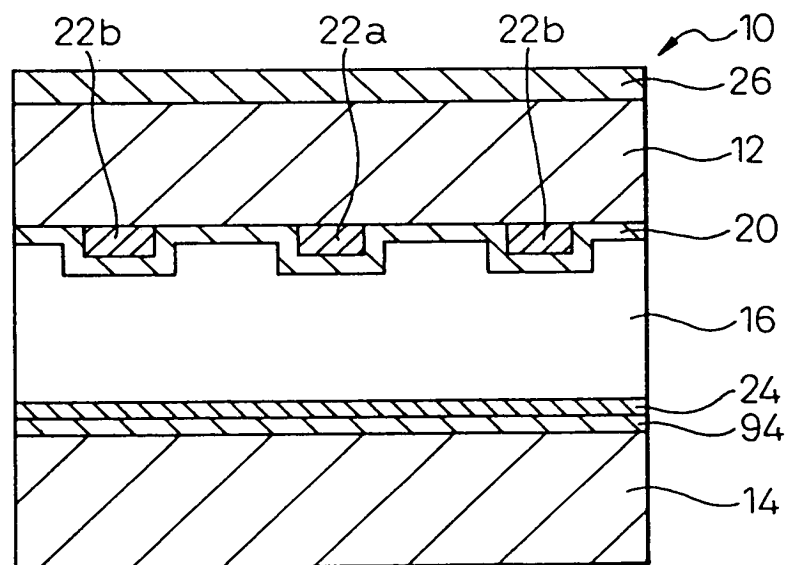


Fig.140



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Fig.141

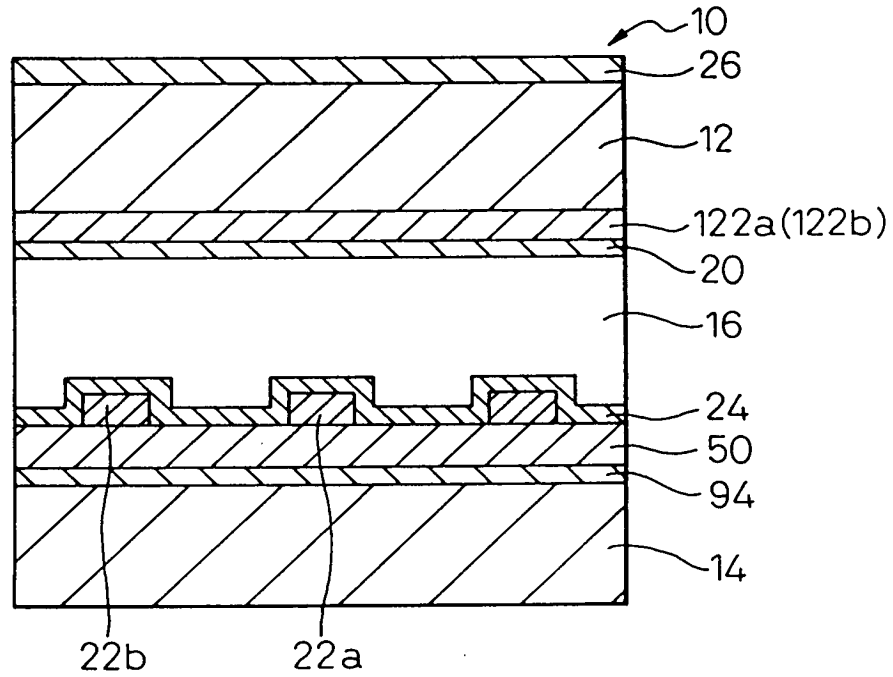
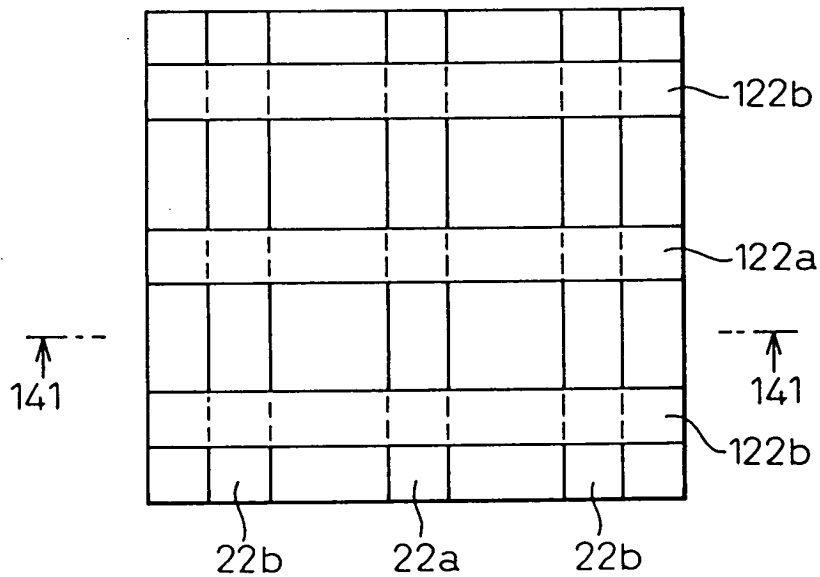


Fig.142



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Fig.143

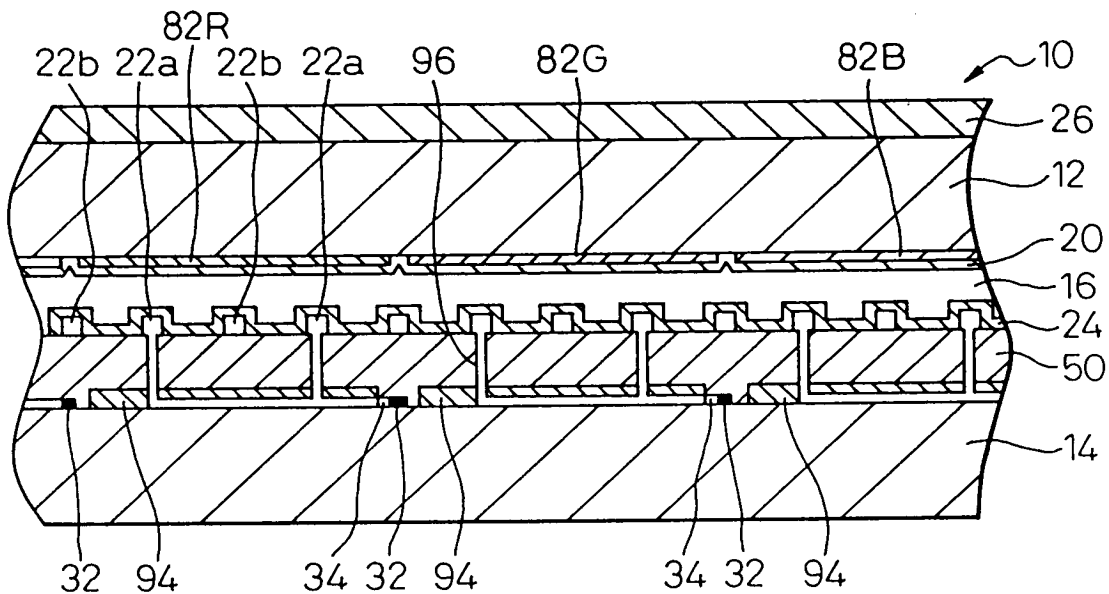
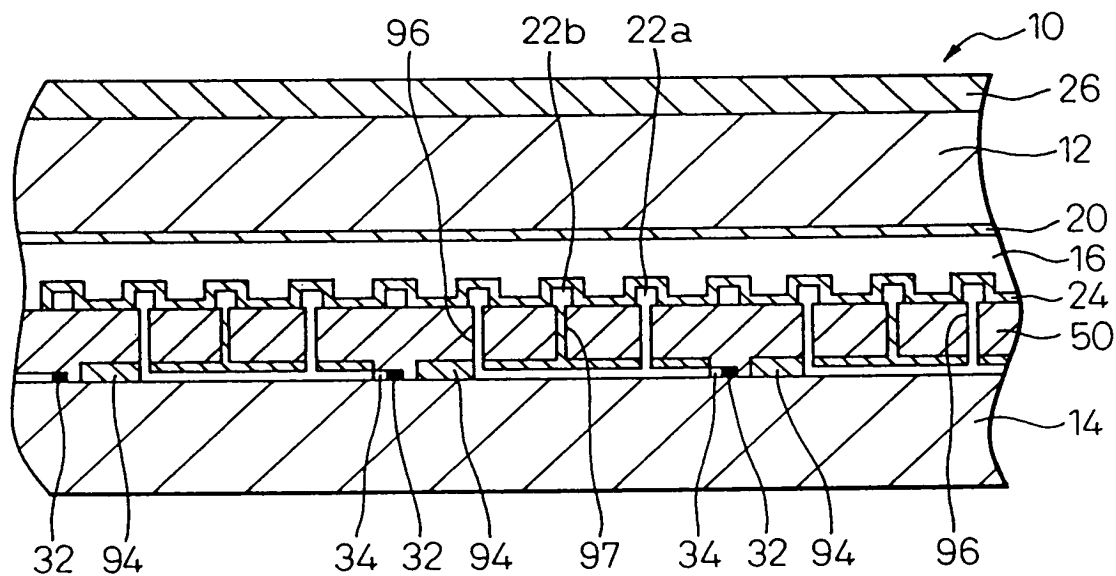
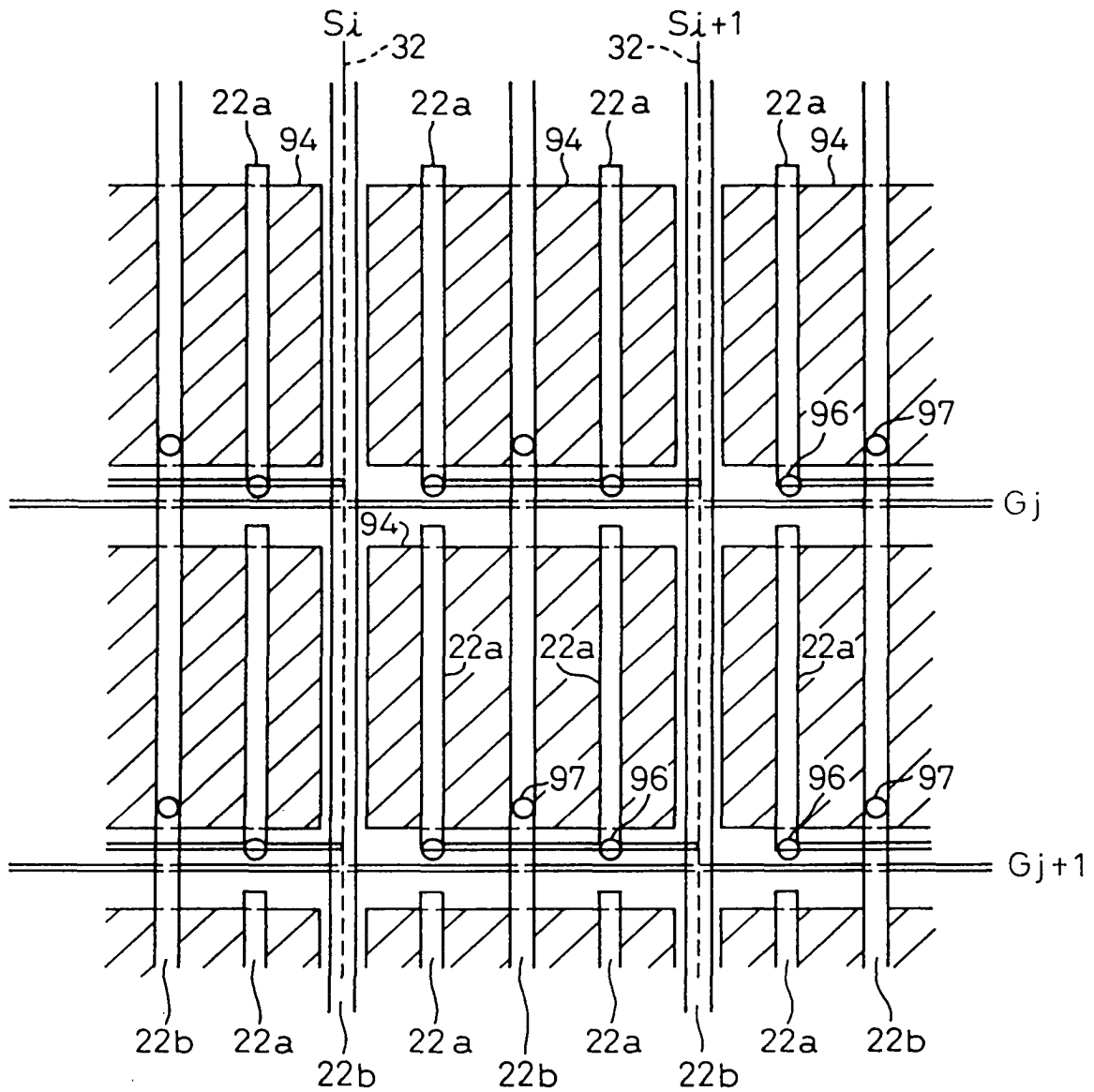


Fig.144



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Fig.145



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Fig.146

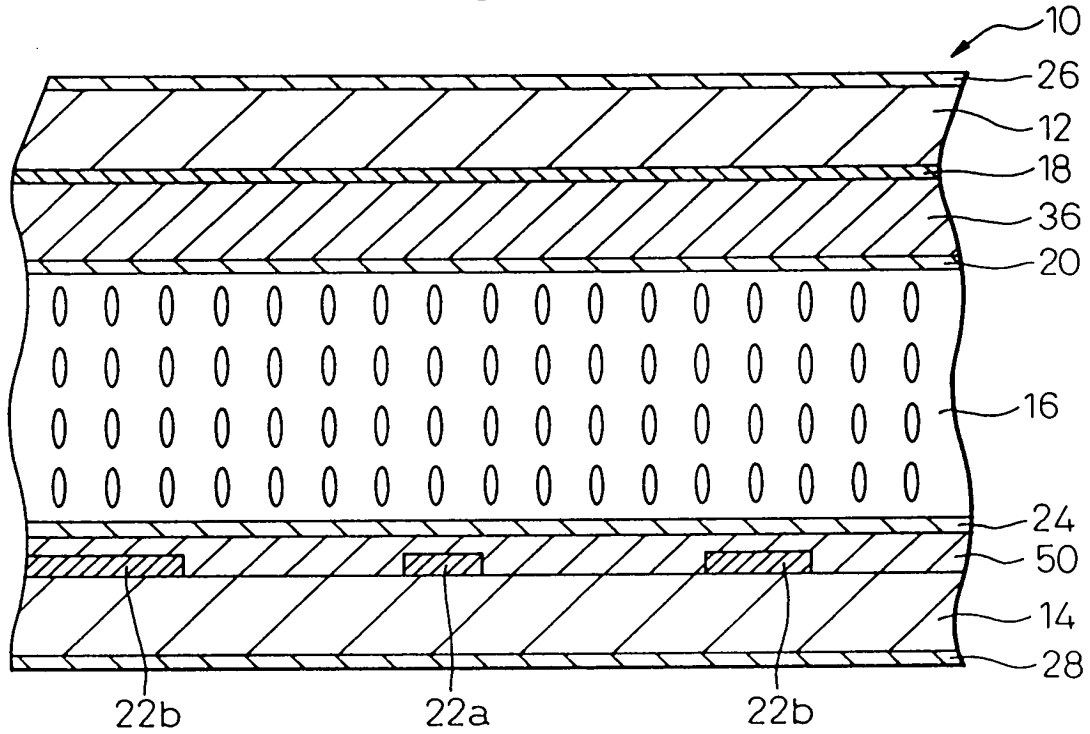
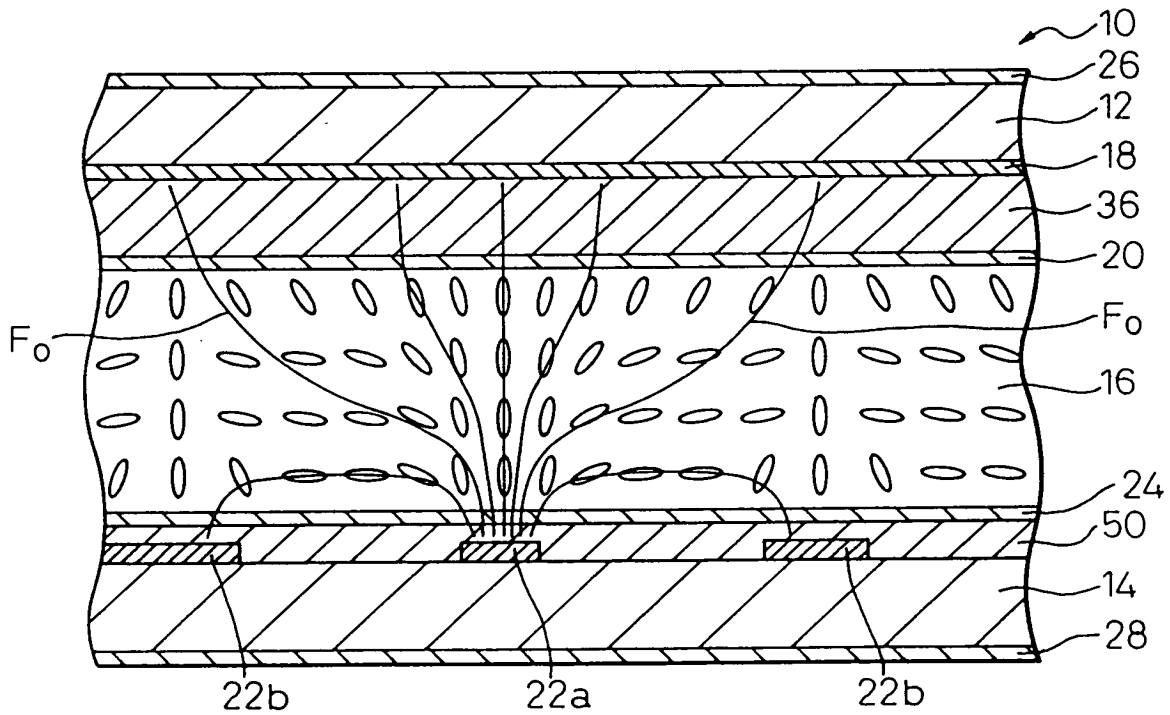


Fig.147



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Fig.148A

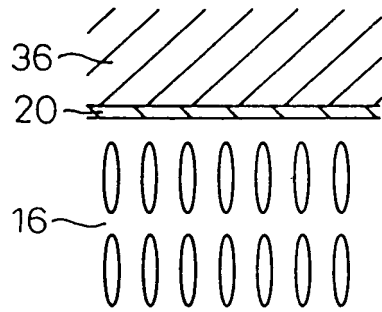


Fig.148B

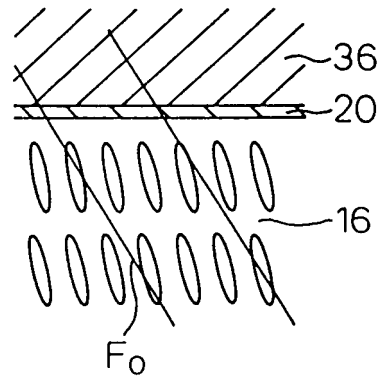


Fig.149A

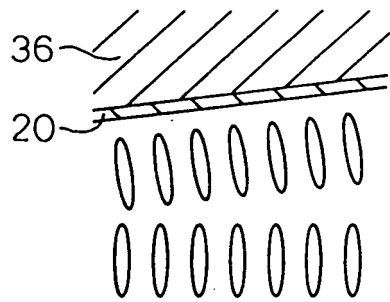
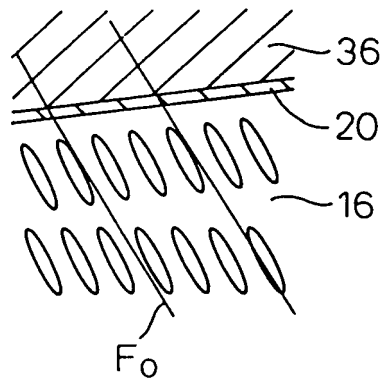


Fig.149B



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Fig.150

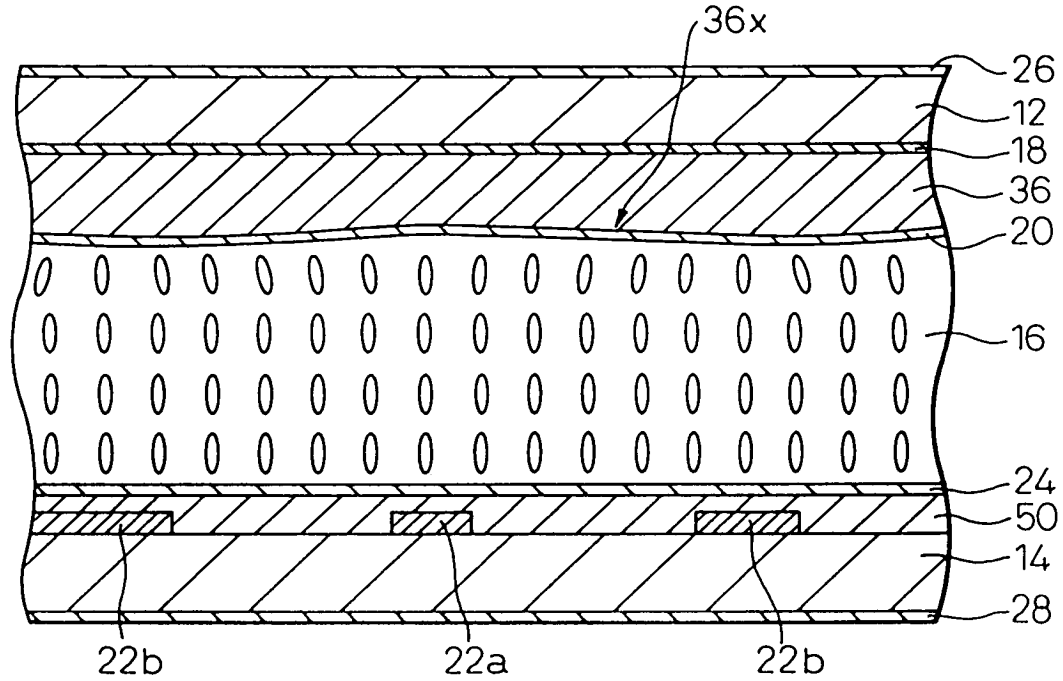
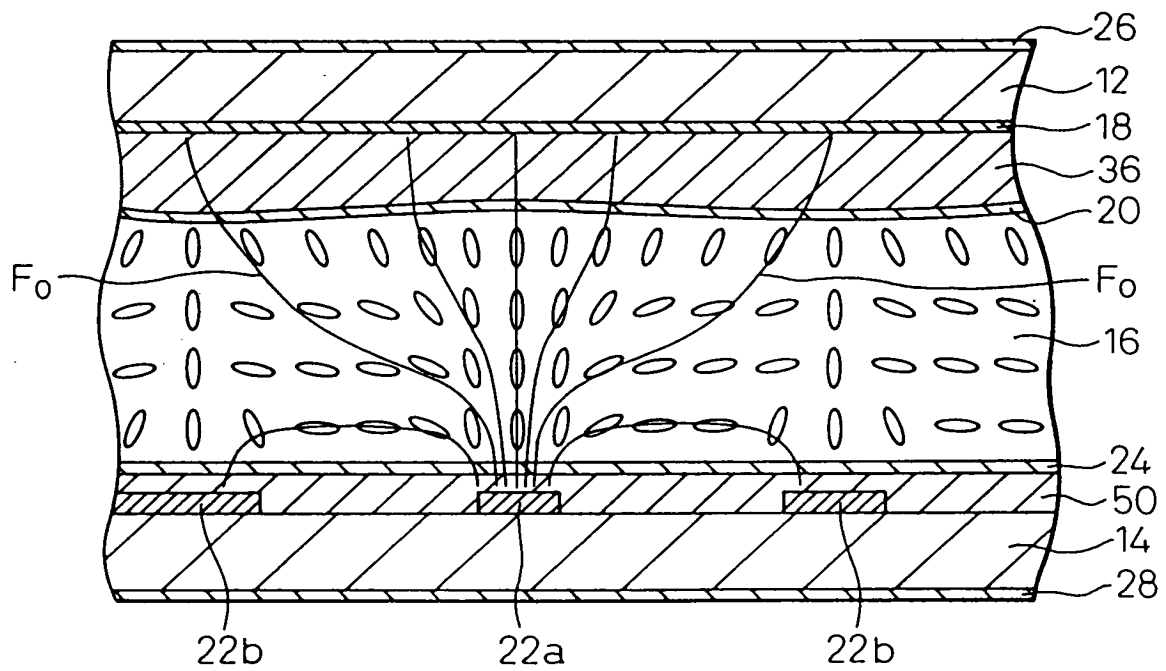


Fig.151



This diagram shows a cross-section of a multi-layered structure. At the top, there is a thin layer (26) with diagonal hatching. Below this is a layer (12) with diagonal hatching. A thin layer (18) is shown below layer 12. A layer (36) with diagonal hatching is below layer 18. A layer (20) with diagonal hatching is below layer 36. A large central layer (16) is filled with a grid of small circles, representing a porous or cellular structure. Below layer 16 is a layer (24) with diagonal hatching. A thin layer (50) is shown below layer 24. A layer (14) with diagonal hatching is below layer 50. A thin layer (28) is shown below layer 14. Labels 36b, 36x, and 36a point to different regions within the top layers. Labels 22b, 22a, and 22b point to different regions within the bottom layers.

This diagram shows a cross-sectional view of a multi-layered structure. The top layer is labeled 26. Below it is a thin layer 12, followed by a thicker layer 18. A layer 36 is shown below 18. A central layer 20 contains a porous medium 16, represented by a grid of ovals. A dashed oval highlights a portion of this porous medium. Below layer 20 is a thin layer 24, followed by a thicker layer 50. At the bottom is a layer 14, and the entire structure is bounded by a bottom layer 28. Two electrodes, 30 and 22b, are located at the bottom of the porous layer 20. Arrows RA and RB point to the porous medium 16 from the top and bottom respectively.

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Fig.154

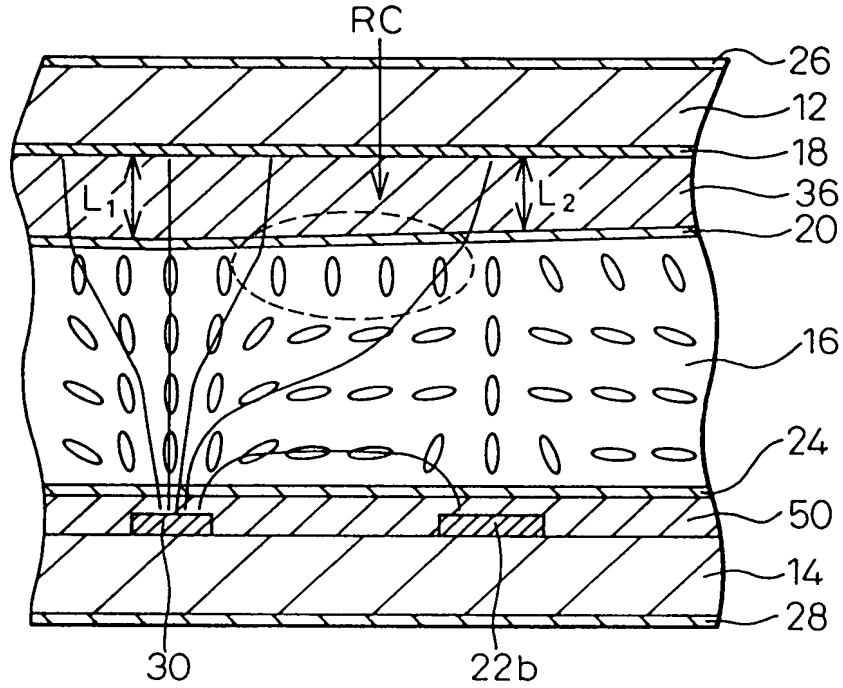
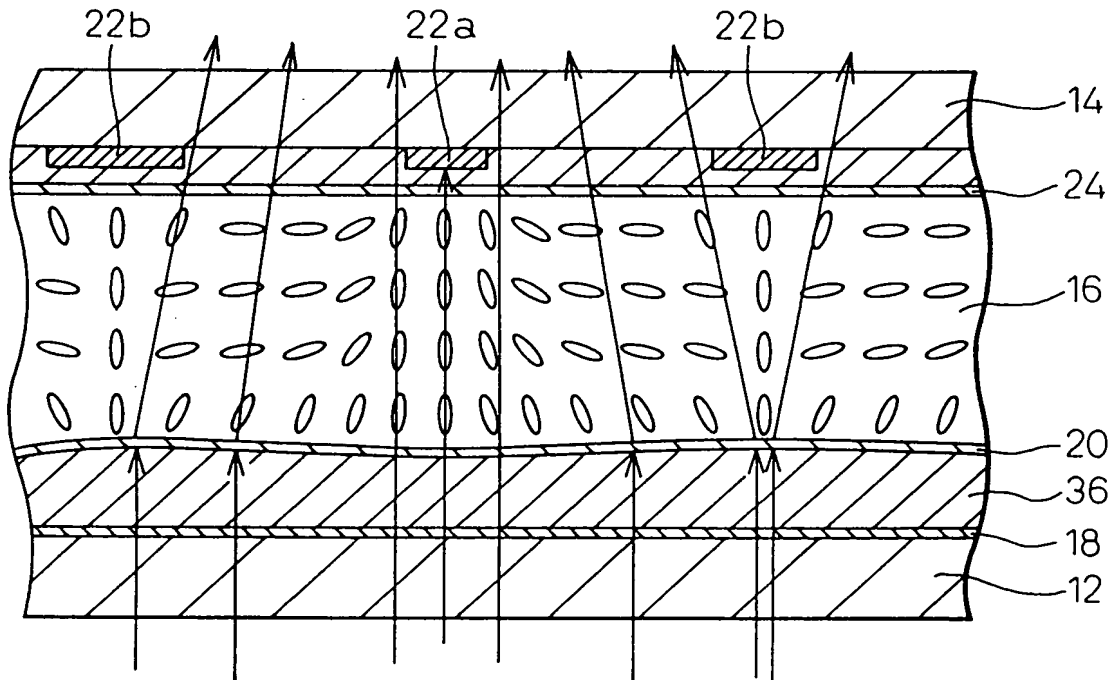
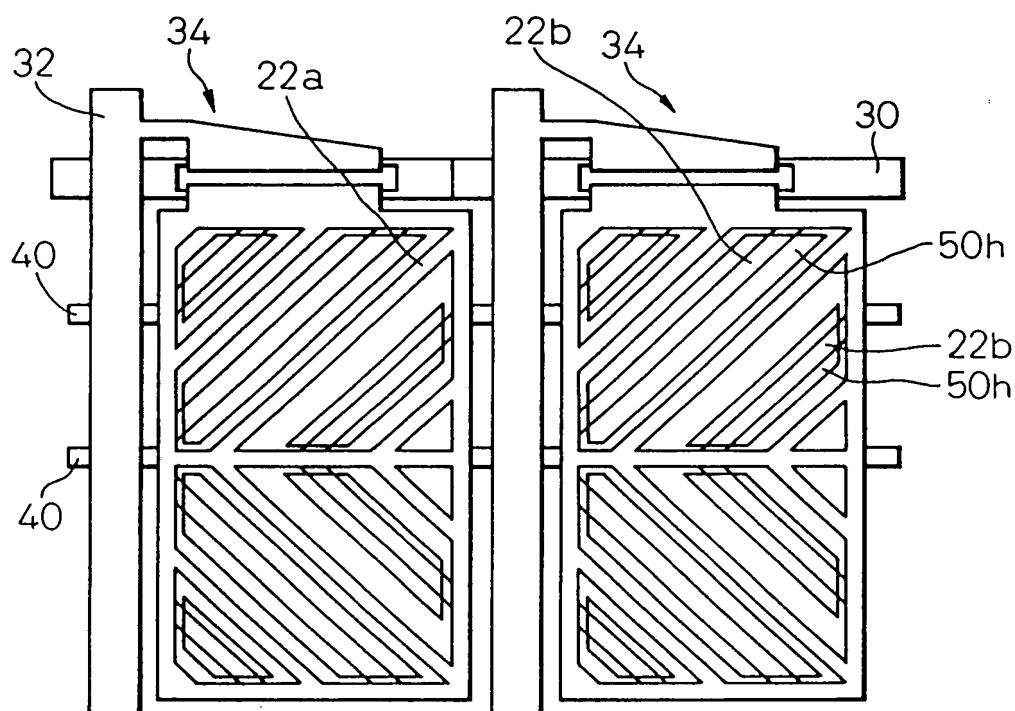


Fig.155



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Fig.156



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Fig.159

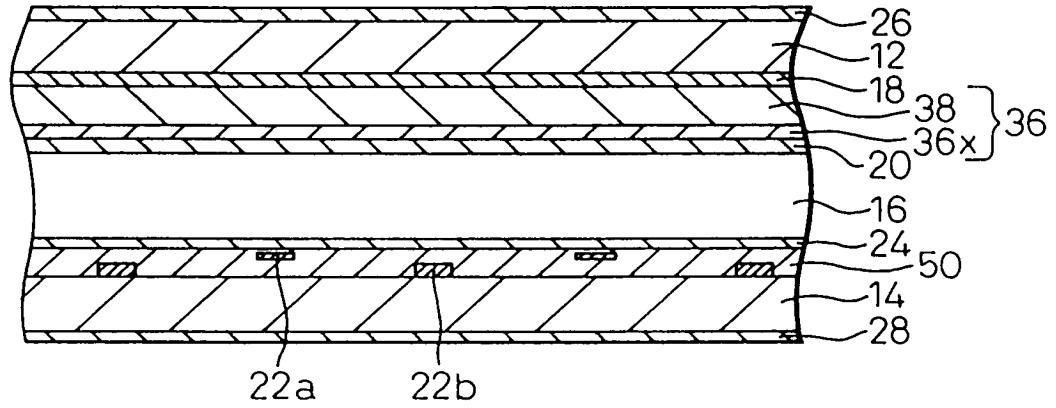


Fig.160

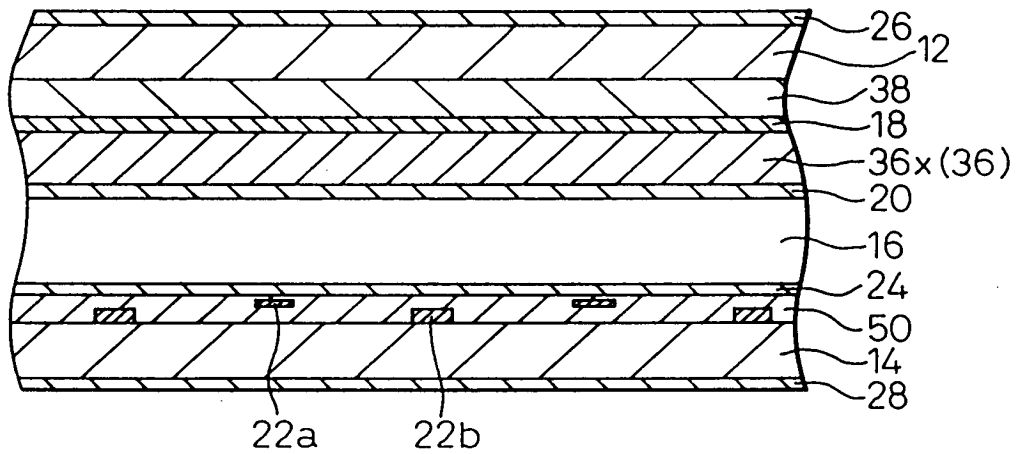
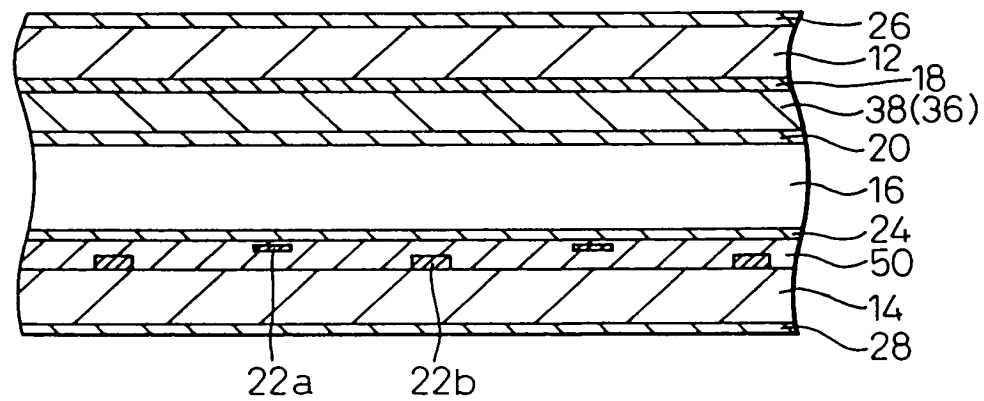


Fig.161



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Fig.162

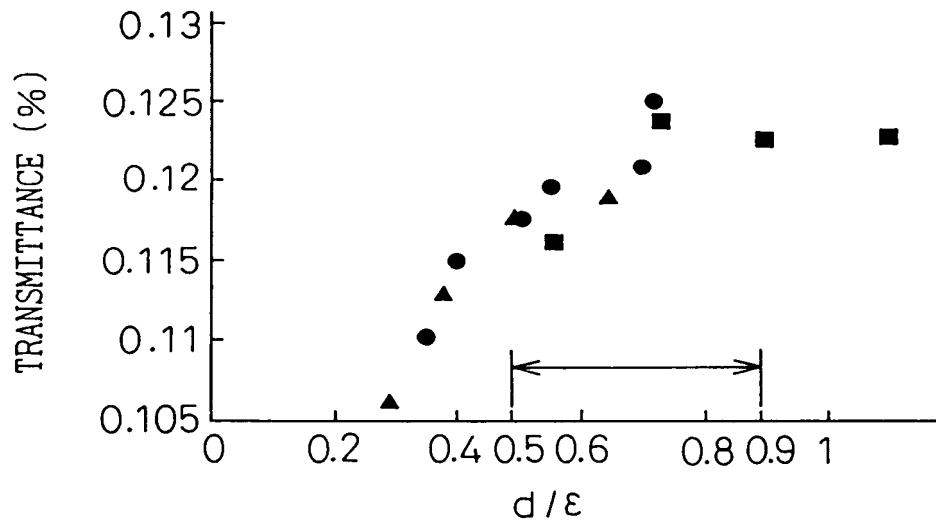
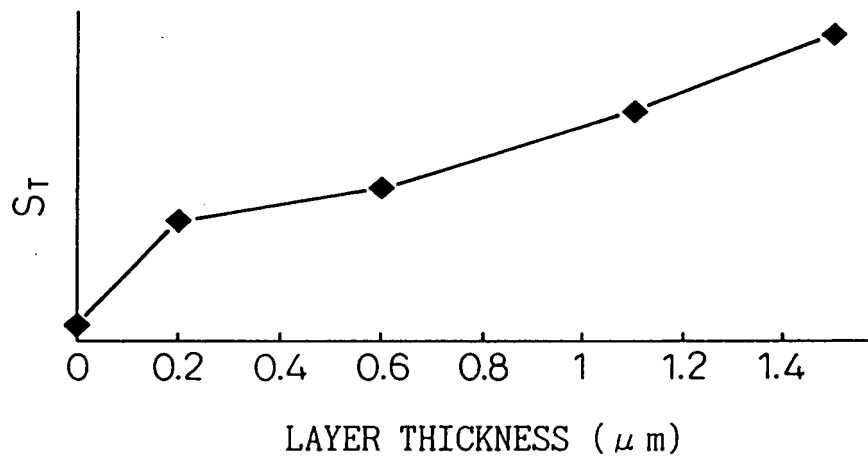


Fig.163



[illegible]

The chemical structure shows a fluorene core, which consists of three fused benzene rings. The structure is substituted with six 'R' groups: two on the leftmost ring (at the 2 and 3 positions), two on the topmost ring (at the 6 and 7 positions), and two on the bottommost ring (at the 9 and 10 positions).

